S.E. Alaska King and Tanner Crab Proposals, Briefing Documents, Board Actions and Adopted Regulatory Language for the 1993 Alaska Board of Fisheries Meeting

Anchorage, February 1993

Alaska Department of Fish and Game
Division Of Commercial Fisheries
Juneau, Alaska

Regional Information Report No. 1J93-09
April 1993

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S.E. ALASKA KING AND TANNER CRAB PROPOSALS, BRIEFING DOCUMENTS, BOARD ACTIONS AND ADOPTED REGULATORY LANGUAGE FOR THE 1993 ALASKA BOARD OF FISHERIES MEETING

Anchorage, February 1993

Compiled By
Catherine Botelho

Regional Information Report[1] No. 1J93-09

Alaska Department of Fish and Game
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FOREWORD

This document contains the king and Tanner crab proposals, briefing documents, Board of Fishery actions, and the regulatory language (for those proposals that passed) for the proposals that were considered by the Alaska Board of Fisheries at its February 1993 shellfish meeting in Anchorage.

Complete documentation for each proposal follows its first page reference in the Table of Contents.

TABLE OF CONTENTS

REGULATORY PROPOSALS 274 AND 282

5 AAC 46.010. FISHING SEASONS. 5 AAC 46.020. BAG LIMITS, POSSESSION LIMITS, AND SIZE LIMITS. 5 AAC 77.662. PERSONAL USE Dungeness CRAB FISHERY. 5 AAC 77.664. PERSONAL USE KING CRAB FISHERY. 5 AAC 77.666. PERSONAL USE Tanner CRAB FISHERY. 5 AAC 02.115. SUBSISTENCE Dungeness CRAB FISHERY. 5 AAC 02.120. SUBSISTENCE KING CRAB FISHERY. 5 AAC 02.125. SUBSISTENCE Tanner CRAB FISHERY.

I prefer that the shellfish not be opened for any users during the months of August, September. Also, that it not be opened anymore than 5 months out of the year. (Crab are migrating in Aug. and Sept. and are too easy to catch -- in January and February they're molting.) Tanner and Dungeness bag limit for subsistence/sports users should be cut in half. To date, the red crab fishery has been closed since 1986 or so. There was talk that the fishery might open for three days. I reject any "solution" less than 7 days. I nor anyone else (commercial) cannot make enough to meet our expenses, (insurance, bait, fuel, labor). I suggest that we be allowed to commercial fish the red crab during November for 7 days, 40 pot limit. That will cut the effort by 60%.

AS IT STANDS: If 50 people go out and get their 6 males (King) 8 lb average - that's 24,000 lb a day x 30 days = 72,000 a month which is 864,000 a year. This consumption exceeds the commercial harvest of 300,000 high guideline level. This outcome in the sole reason why there isn't a commercial fishery for king crab. It's being overfished by divers, sport fishermen and subsistence users.

PROBLEM: We're over-fishing our red, Tanner, and Dungeness crab fisheries. Subsistence and sport users have access to these shellfish - all year long. These users are not being surveyed nor regulated as to the volume they are catching. When I see well over 400 crab pots in the Juneau/Auke Bay area alone -- it only reasons that this is not subsistence but a fishery itself.

WHAT WILL HAPPEN IF NOTHING IS DONE? All of our stocks will be depleted -- no future for commercial, subsistence, or sport users.

WHO IS LIKELY TO BENEFIT? Subsistence, sport, and commercial users.

WHO IS LIKELY TO SUFFER? No one.

OTHER SOLUTIONS CONSIDERED

PROPOSED BY: Norval E. Nelson (HQ-92-F-90)

1992/93 BOARD OF FISHERIES BRIEFING DOCUMENT

Title:	Revisions to Subsistence, Sport, Personal Use and Commercial Fishing Regulations for Dungeness, King, and Tanner Crab Fisheries.
Proposal No.	274 and 282
Page	190 and 198
Proposed by:	Norval Nelson, Jr.
Commercial Fisheries Division Author:	Doug Mecum, Regional Mgmt. Biologist Tim Koeneman, Regional Shellfish Biologist Ken Imamura, Asst. Shellfish Biologist

SYNOPSIS

If adopted this proposal would:

1. Close all fisheries for "shellfish" during August and September and create an open fishing season (all fisheries) for "shellfish" that is no more than five months long.
2. Reduce the daily sport, personal use, and subsistence bag and possession limits for Tanner, king, and Dungeness crab by 50%.
3. Establish a minimum season length for the commercial red king crab fishery of seven days with a 40 pot limit per boat.

The department has submitted a management plan proposal (Proposal 278) for red king crab in which the issues of pot limits and season length for the commercial fishery and the department's recommended alternatives are discussed in detail.

The department does not support the minimum season length for the red king crab fishery called for in this proposal. The department has no position on the allocative aspects of this proposal (reduced sport/personal use bag limits). However, a summary of the pertinent regulations and harvests in the non-commercial fisheries are summarized to assist the Board in reviewing this proposal.

BACKGROUND

This proposal was included in both the subsistence (Proposal 274) and commercial (Proposal 282) sections of the regulatory proposal booklet. This briefing document will address both proposals. In addition, regulatory proposals affecting Dungeness crab fisheries were not open during this call for proposals. Therefore, this briefing document will not address the proposed changes to Dungeness crab regulations.

Stock Status

The brown king crab season for the traditional fishing areas is open from February 15 until closed by emergency order. Exploratory fishing areas for brown king crabs are open year-round except for a short closure period prior to the Tanner crab fishery. Brown king crab populations in traditional fishing areas are depressed relative to historical levels. In recent years, the brown king crab fishery has been closed

by emergency order prior to reaching the lower ends of the respective guideline harvest ranges (GHRs).

Fisheries for blue king crab are constrained by limited preferred habitat and low overall abundance. Unrestricted commercial harvest of sublegal male and female blue king crab infected by the parasitic barnacle *Briarosaccus callosus* is permitted during the general open season. Similar regulations are being contemplated for parasitized red and brown king crab (see department proposal 278).

Red king crab populations in Southeast Alaska are generally depressed; the commercial fishery for red king crab has been closed since October of 1984. However, in recent years, stock abundance has increased to levels approaching the minimum threshold level of 300,000 lbs of legal male crab.

Tanner crab populations in Southeast Alaska have been relatively stable in recent years. For the past few seasons, the fishery has taken the maximum annual allowable harvest. In some areas there is a very high infection of bitter crab disease, which is a terminal disease in Tanner crabs that renders the meat on infected crabs very bitter and unsuited for market. In Tanner crab fisheries, district closures have been used to control the spread of bitter crab disease. Other measures, including on-grounds sorting, offloading, and processing requirements, are being considered to permit harvest of marketable crabs from areas of high disease incidence while minimizing the spread of this disease (see department proposal 276).

Regulatory Summary

Sport Fishery:

Current regulations (Table 1) prohibit the harvest of king crab by non-residents. Under sport fishing regulations, non-residents may harvest and have in possession, up to five Tanner or Dungeness crab per day, in the combined aggregate. Only male Tanner crab greater than 5.5 inches in width of carapace may be legally taken and possessed. No more than four pots per person or a maximum of ten pots per vessel may be used to take shellfish at any time.

Personal Use:

Under personal use regulations, residents (with a valid sport fishing license) may harvest and have in possession, up to 30 Tanner crab per day. Only males are legal. There is no minimum size limit for Tanner crabs. Six male red, brown, or blue king crab, in combined aggregate, may be taken and possessed. Red and brown king crab must be a minimum of seven inches in carapace width and blue king crab must be a minimum of 6.5 inches in carapace width (including spines). No more than five pots per person or 10 pots per vessel may be used to take personal use shellfish at any time.

Commercial fishermen may retain any portion of their lawfully taken commercial catch of shellfish for their personal use. This is one instance where a non-resident may lawfully possess king crab. There is no limit to the number or amount of shellfish that may be retained for personal use under this provision in the commercial fishing regulations.

Depending on residency, commercial fishermen may also fish under sport or personal use regulations during periods closed to commercial harvest. However, they may not fish under any of these regulations for 14 days prior to a commercial fishery for that species.

Subsistence:

The Board has determined that there is no customary and traditional use of king and Tanner crab in Southeast Alaska [5AAC 02.107 (a) through (l)]. As a result, there is no provision for subsistence harvest of these species.

Harvest Summary

Non-commercial Fisheries:

Limited information exists on the non-commercial harvest of king and Tanner crab in Southeast Alaska. Harvest data is available from a survey of 30 communities throughout Southeast Alaska that was conducted in 1987 by the Division of Subsistence. This survey estimated a total non-commercial harvest in Southeast Alaska (excluding Juneau and Ketchikan) of approximately 63,400 lbs of king crab (all species combined) and 28,000 lbs of Tanner crab (Figures 1, 2, and 3).

The Division of Sport Fisheries has obtained estimates of the personal use harvest of king and Tanner crab in the Juneau and Ketchikan areas for the period from 1988 through 1992 (Table 2). It should be noted that these are minimal estimates since surveys are only conducted from April through September. In recent years, particularly in the Juneau area, harvesting of king crab using scuba gear has been increasing in popularity. However, no harvest estimates are available for the personal use dive fishery.

For Juneau, the harvest of king crab has increased from about 550 crab (roughly 4,000 lbs) in 1988 to 5,700 crab (41,000 lbs) in 1992. The harvest of Tanner crab in the Juneau area has declined over the same period from about 3,000 Tanner crab (6,600 lbs) to 1,000 Tanner crab (2,200 lbs) in 1992. This decline in harvest may be related to 1) declining abundance of Tanner crab in the Juneau area, 2) increasing availability and harvest of the more highly preferred king crab, 3) increasing incidence of Tanner crab infected with bitter crab disease, or 4) some combination of these factors.

The harvest of king and Tanner crab is extremely low in the Ketchikan area which is on the margin of productive habitat for these species.

Reliable estimates of the total harvest of king crab for all of Southeast Alaska are not available. However, it is reasonable to assume that the current harvest is over 100,000 lbs (60,000 lbs for communities other than Juneau and at least 40,000 lbs for the Juneau area).

Commercial Fisheries:

The commercial fishery for red king crab has been closed since 1984. Prior to 1984, the total harvest ranged from about 200,000 to over 600,000 lbs. Brown king crab catches have declined from an average of about 700,000 lbs during the period from 1981 through 1988, to less than 200,000 lbs in the last few years. For the last five years the commercial Tanner crab harvest has fluctuated around the 2,000,000 lb maximum harvest quota specified in regulation.

MANAGEMENT ISSUES

Management issues associated with the three different aspects of this proposal will be discussed separately.

Close all fisheries for "shellfish" during August and September and establish an open fishing season (all fisheries) for "shellfish" of no more than five months.

A complete closure of all shellfish fisheries during the months of August and September would have the most impact on the non-commercial fisheries. This is because the open season for personal use harvest of king crab is from July 1 through March 31 and most of the personal use/subsistence harvest of king and Tanner crab probably occurs from July through September. The commercial fishery for red king crab opens by regulation on November 1 and the brown king and Tanner crab fisheries open on February 15. These fisheries would not be significantly impacted by adoption of this proposal. As a result, the intent of this proposal appears to be aimed at reducing the non-commercial harvest of king and Tanner crab.

Reduce the daily sport, personal use, and subsistence bag and possession limits for Tanner and red king crab by 50%.

At the present time, the harvest of Tanner crab by non-commercial fisheries is very limited, even though bag and possession limits are relatively liberal (i.e., 30 Tanner crab per day and no closed season). In

addition, Tanner crab stocks appear to be healthy and stable in most areas of Southeast Alaska. A reduction of the daily bag and possession limits would probably not reduce the personal use harvest by a detectable amount.

The situation for red king crab is somewhat different. Red king crab stocks in Southeast have been depressed for many years and the commercial fishery has been closed since 1984. Continued commercial closures are in response to low stock abundances in historically productive fishing areas, some of which are fairly remote. In other areas, some of which are near Juneau and Sitka, stock abundances are near levels that sustained past commercial fisheries. These stocks are being fished by personal use/subsistence fisheries at levels that may be approaching the long-term commercial harvest. For example, in the Juneau area, a minimum of 40,000 lbs of king crab were harvested for personal use in 1992. This is close to the average harvest that occurred in the area during the years prior to 1984 when the commercial fishery was opened. A reduction of the personal use bag and possession limits for king crab would certainly reduce the harvest of this species. However, data is not available to determine how significant this harvest reduction would be.

Establish a minimum season length for the commercial red king crab fishery of seven days with a 40 pot limit per boat.

The Board of Fisheries has established that a minimum threshold of 300,000 lbs of legal male crab must be available for harvest prior to allowing a commercial fishery. The commercial fishery for red king crab has not been opened since 1984 because stock assessment surveys conducted by the department have indicated that the overall abundance of legal male crab was below the 300,000 lb minimum threshold. The minimum threshold regulation was adopted by the Board of Fisheries based in part on input from the fishing industry that a fishery below this level would not be economically acceptable.

The department has submitted a management plan proposal to the Board (Proposal 278) for the commercial red king crab fishery. A minimum season length is not one of the recommended management options. The department does not support a minimum season length for the commercial red king crab fishery because it could result in overharvest and localized depletion of king crab stocks, particularly when populations are at low levels.

ENFORCEMENT ISSUES

Adoption of this proposal is not likely to result in significant enforcement concerns.

FISCAL NOTE

No significant additional management or enforcement costs are anticipated if this proposal is adopted.

CONCLUSIONS AND RECOMMENDATIONS

* The department does not support a guaranteed minimum season of seven days for the commercial red king crab fishery.

* The department has no position on the allocative aspects of this proposal which call for a August through September closure and reduced bag and possession limits for the non-commercial fisheries.

REGULATORY LANGUAGE

The general nature of this proposal makes it difficult to develop specific regulatory language. Adoption of all aspects of this proposal would result in significant changes to commercial, sport, personal use and subsistence regulations for Tanner and red king crab. However, the department will be prepared to assist the Board in developing regulations, if all or part this proposal is adopted.

Table 1. Non commercial regulations for harvest of king and Tanner crab in Southeast Alaska. [Proposal 274/282]

PERSONAL USE[1]/RESIDENT[2]

Species	Bag/Possession	Open Season	Methods
King	6 Males	Red July 1 - March 31 Blue July 1 - March 31 Brown Entire Year	Pots, ring nets, diving, deep nets, hooked or hookless hand lines and by hand; No more than 5 pots per person or 10 pots per vessel.
Tanner	30 Males	Entire Year	

SPORT[1]/NON RESIDENT

Species	Bag/Possession	Open Season	Methods
King	None Allowed		Pots, ring nets, diving, deep nets, hooked or hookless hand lines and by hand; No more than 4 pots person or 10 pots per vessel.
Tanner & Dungeness	(in combination) 5 per day/5 in possession, male only	Entire Year	

SUBSISTENCE[3]

Species	Bag/Possession	Open Season	Methods
King	6 Males	Red July 1 - March 31 Blue July 1 - March 31 Brown July 1 - March 31	Any method except use of a line attached to a rod or pole, use of explosives or chemicals.
Tanner Crab	30 either sex	Entire Year	

[1] Personal use shellfish harvesting requires a sport fishing license.

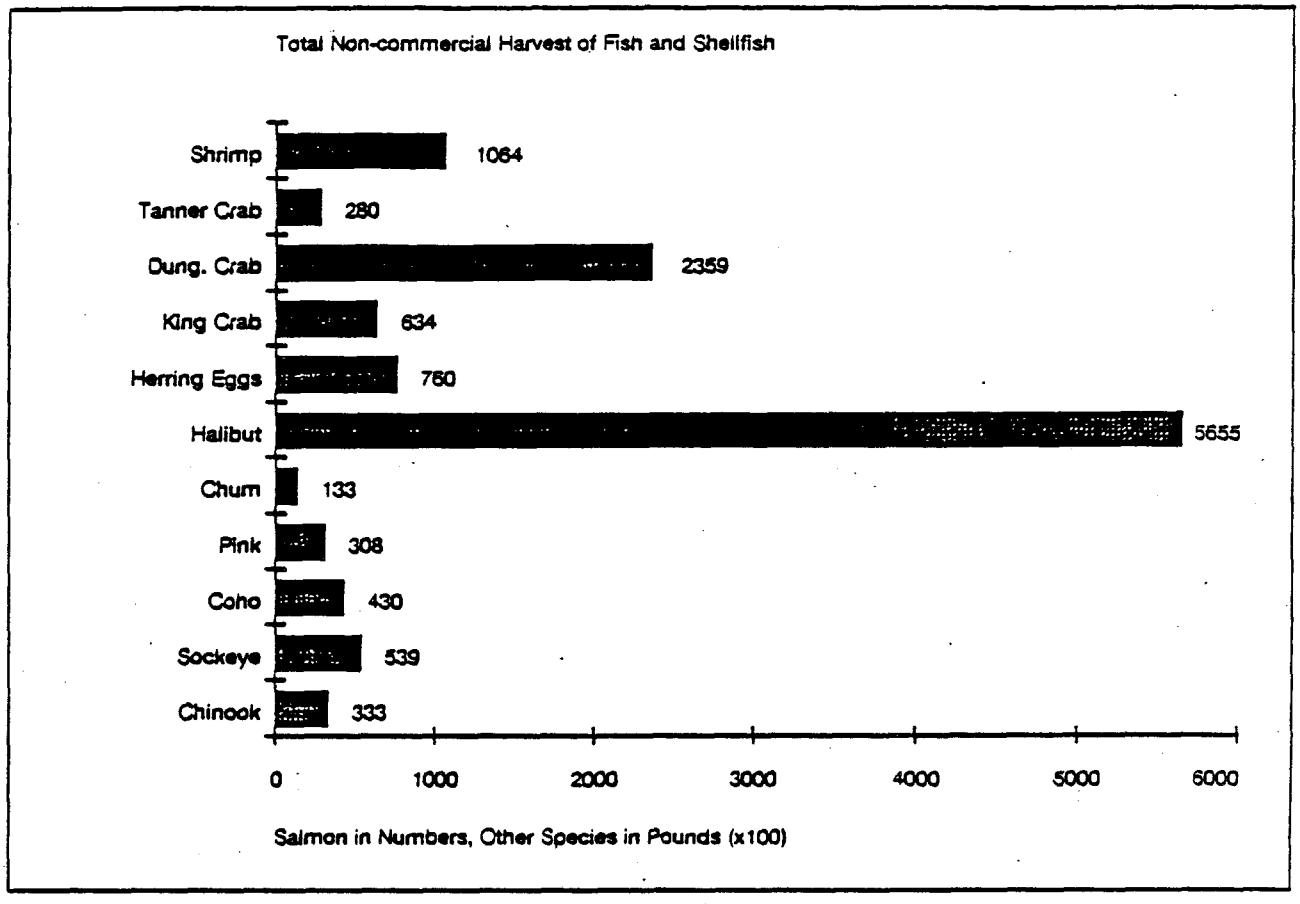
[2] A **resident** is a person who for the preceding 12 consecutive months has maintained a permanent place of abode in the state and who has continually maintained his voting resident in the state: and in the case of a partnership, association, joint stock company, trust, or corporation.

[3] The Board has determined there is no customary and traditional use of king and Tanner crab in Southeast Alaska. Therefore, there is no subsistence use of these species even though gear, bag limit, and seasons regulations exist.

Table 2. Estimated shellfish effort and crab harvest for selected Southeast Alaska marine boat fisheries from 1988-1992.

	1988	1989	1990	1991	1992
Juneau					
Survey Period	4/11-9/25	4/24-9/24	4/23-9/23	4/15-9/29	4/27-9/27
Effort (boat-days)	2,287	2,652	2,622	3,812	5,411
Dungeness crab harvest	6,459	8,356	6,289	13,433	12,675
Tanner crab harvest	3,042	3,369	1,883	1,294	1,035
King crab harvest	552	1,849	1,960	2,467	5,673
Ketchikan					
Survey Period	4/11-9/25	4/24-9/24	5/07-9/23	4/29-9/29	4/27-9/27
Effort (boat-days)	1,398	508	614	1,394	1,387
Dungeness crab harvest	9,043	2,688	3,367	7,631	10,225
Tanner crab harvest	0	100	0	0	22
King crab harvest	0	0	0	0	0
Sitka					
Survey Period	4/11-9/25	4/24-7/02	None	None	None
Effort (boat-days)	635	76			
Dungeness crab harvest	1,642	241			
Tanner crab harvest	10	0			
King crab harvest	26	0			
Petersburg					
Survey Period	4/11-7/17	4/10-7/16	None	None	5/11-7/19
Effort (boat-days)	171	103			282
Dungeness crab harvest	939	501			347
Tanner crab harvest	249	31			778
King crab harvest	0	0			0
Wrangell					
Survey Period	4/11-7/17	4/24-7/16	None	None	5/11-7/19
Effort (boat-days)	107	207			144
Dungeness crab harvest	868	887			773
Tanner crab harvest	60	0			0
King crab harvest	0	0			0
Haines					
Survey Period	4/11-7/10	4/24-6/25	None	None	None
Effort (boat-days)	188	16			
Dungeness crab harvest	257	223			
Tanner crab harvest	254	0			
King crab harvest	0	0			
Craig/Klawock					
Survey Period	None	None	None	None	5/11-7/19
Effort (boat-days)					124
Dungeness crab harvest					694
Tanner crab harvest					0
King crab harvest					0

Figure 1


Total Non-commercial Harvest of Fish and Shellfish
Shrimp
1064
Tanner Crab
280
Dung. Crab
2359
King Crab
634
Herring Eggs
760
Halibut
5655
Chum
133
Pink
308
Coho
430
Sockeye
539
Chinook
333
0
1000
2000
3000
4000
5000
6000
Salmon in Numbers, Other Species in Pounds (x100)

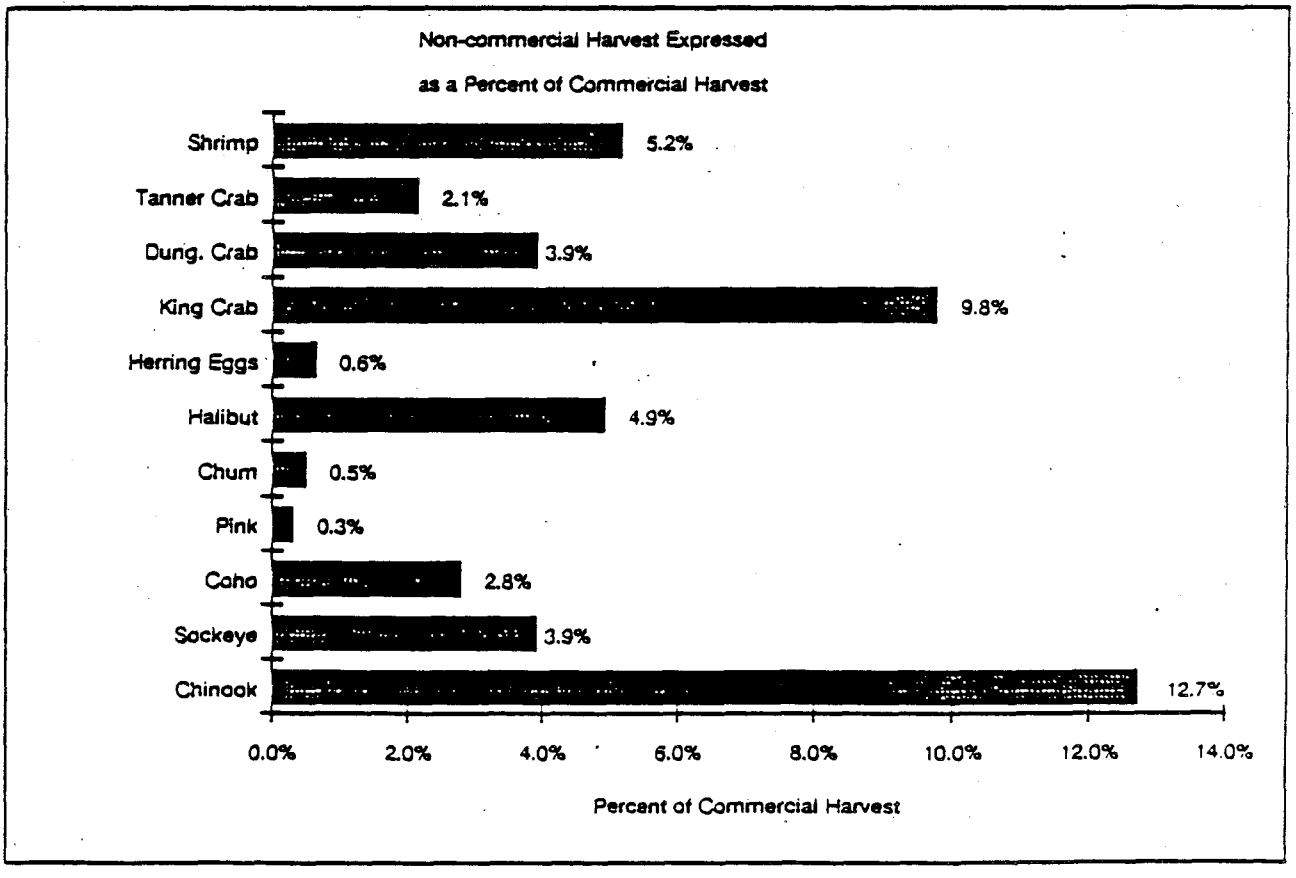

Non-commercial Harvest Expressed
as a Percent of Commercial Harvest
Shrimp
5.2%
Tanner Crab
2.1%
Dung. Crab
3.9%
King Crab
9.8%
Herring Eggs
0.6%
Halibut
4.9%
Chum
0.5%
Pink
0.3%
Coho
2.8%
Sockeye
3.9%
Chinook
12.7%
0.0%
2.0%
4.0%
6.0%
8.0%
10.0%
12.0%
14.0%
Percent of Commercial Harvest

Figure 2. Estimated Total Pounds of King Crab Taken for Home Use 1987 Data, by Community

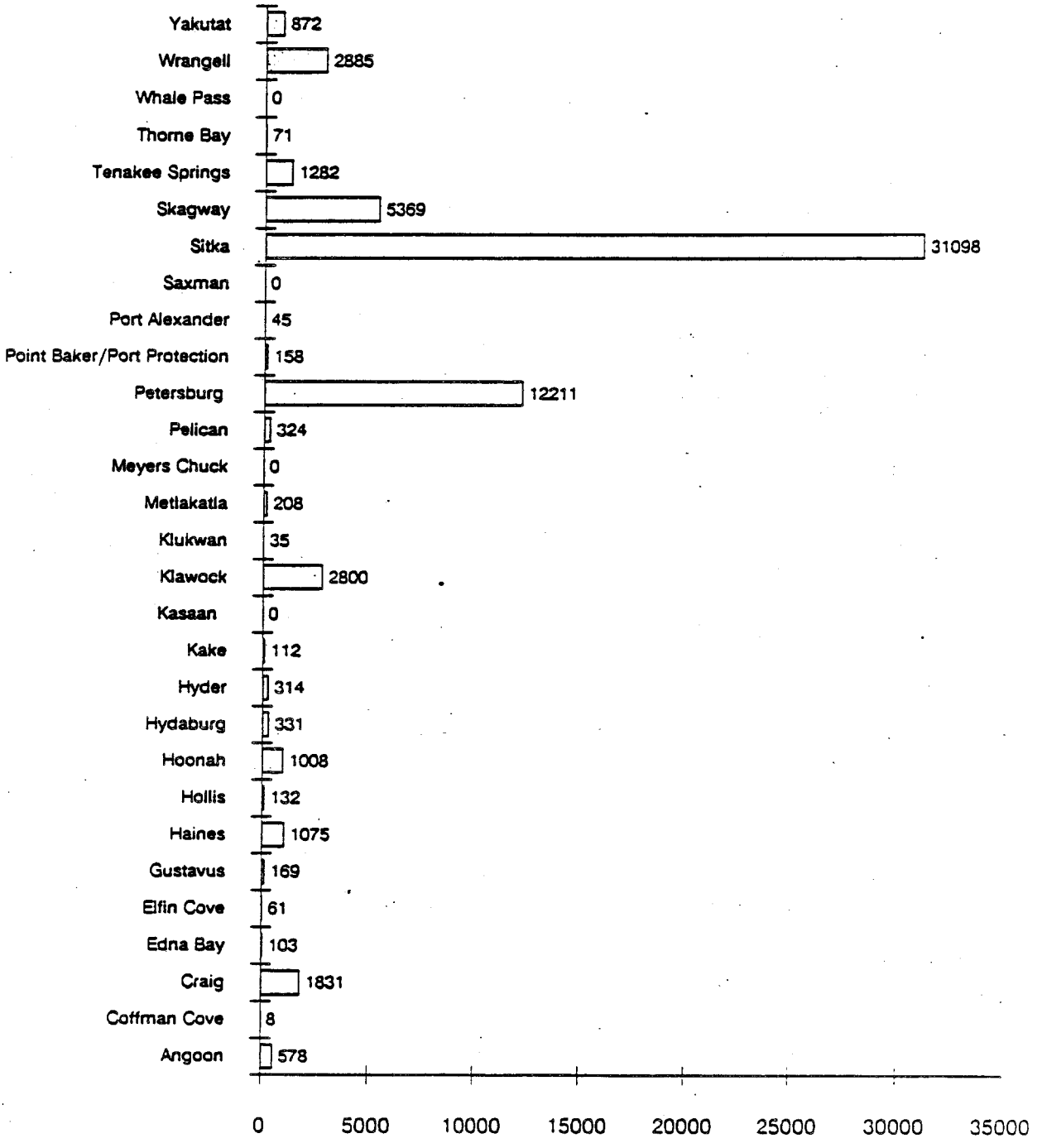
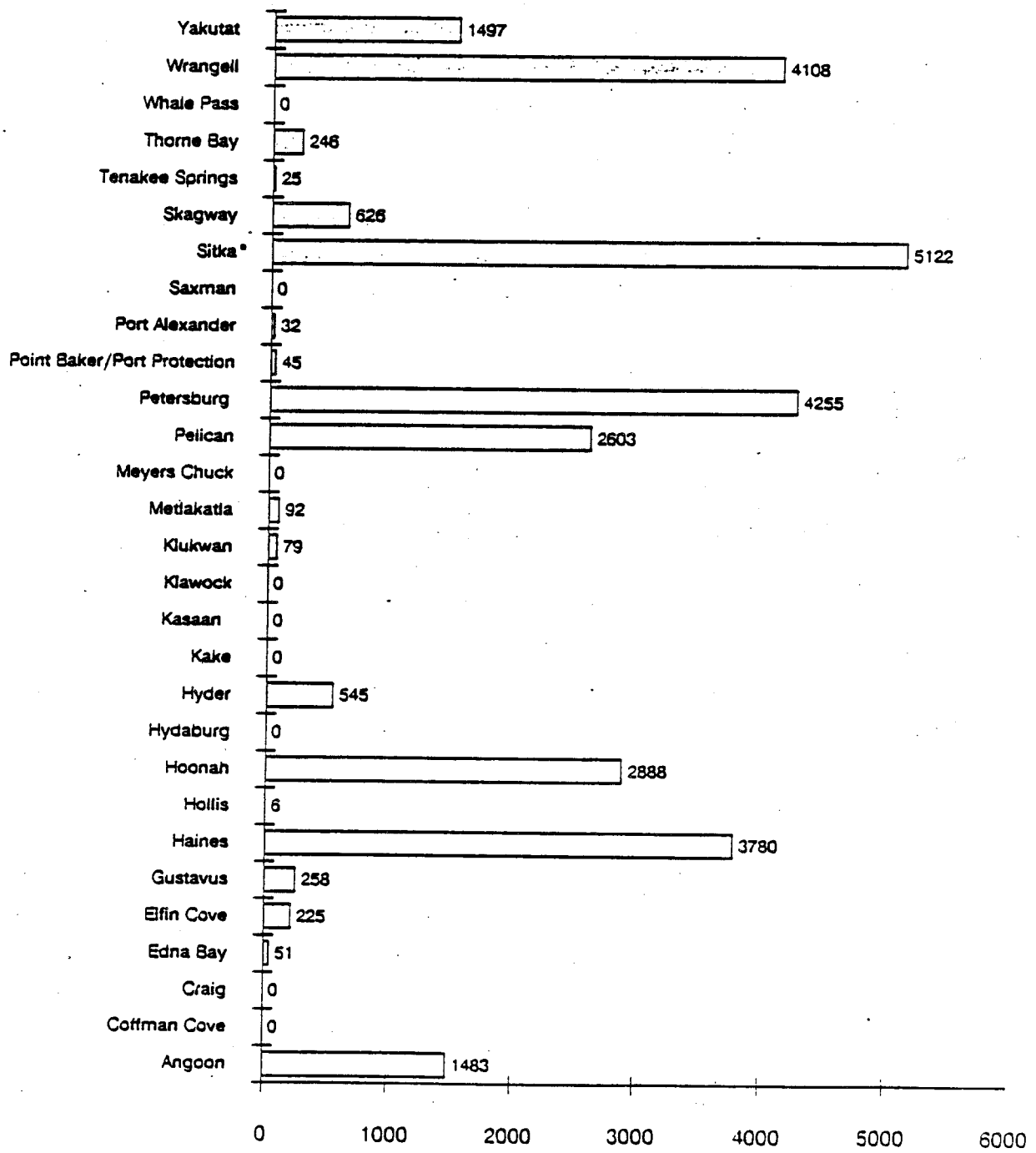


Figure 3. Estimated Total Pounds of Tanner Crab Taken for Home Use 1987 Data, by Community



BOARD OF FISHERIES ACTION
PROPOSAL 274

Action: FAILED 7 to 0

PROPOSAL 282

Action: None

Board members viewed this proposal as being very poorly written and vague. Concern was expressed over several issues raised in the proposal, however. After looking at the personal use catch of king crab in the area, the question was raised as to how divisions will manage over the long term to assure a sustained yield of red king crab in the Juneau area. The other aspect was that there was no definition of a personal use crab pot. A board member thought that the board should be addressing the abuse of large commercial crab pots being used. Information revealed to this board member indicated that there was a heavy black market of red king crab that was being harvested under the guise of personal use. Because this information was presented by a board member and not through the public process, it was deemed more appropriate for the issue to aired in a proposal specific to this issue, to be submitted at a later date for formal board consideration. The proposal was voted down at this point.

(Editor's note: Staff tried numerous times to contact the author of this proposal to obtain clarification on a number of items so a more cohesive briefing document reflecting the author's intents could be developed. Two appointments were made for meetings, both of which were canceled by the author. There was some staff support for discussion of restrictions on the personal use harvest of red king crab, which is significant around some communities such as Sitka and Juneau.)

REGULATORY PROPOSAL 275

5 AAC 35.XXX. Southeast Alaska Tanner CRAB MANAGEMENT PLAN.

Develop a management plan for Tanner crab in Southeast Alaska as follows:

5 AAC 35.XXX. Southeast Alaska Tanner CRAB MANAGEMENT PLAN.

(x) The following options are provided to obtain input from the public and industry to the Board of Fisheries concerning a revision of the current management approach for Tanner crab in Southeast Alaska.

1. Establish optimum harvest levels by major fishing area, with preseason estimates of allowable harvest based on predicted exploitation rates.

2. Provide area closures to prevent conflicts with subsistence or personal use fisheries, to reduce the spread of bitter crab disease or other known pathogens, or overharvest of weak or declining stocks.

3. Increase the use of preseason estimates of season length rather than collating information for inseason closure announcements.

4. Provide for similar storage requirements for pots and ring nets.

PROBLEM: Historically, regulations have developed incrementally in response to increasing need to control harvest levels, constrain an increasingly efficient fishing fleet, and to provide some protection to the continued viability of the Tanner crab resource. Existing regulations do not always adequately reflect the intentions of the statewide policy on Tanner crab resource management no are they particularly comprehensive. Moreover, during the past two years, the department has conducted research and developed programs to estimate exploitation rates and to manage the fishery on a stock or fishing district level.

One, all, or various combinations management options listed above could be used to solve problems associated with the current management strategy. Some of these options have been suggested by industry, and some are allocative.

WHAT WILL HAPPEN IF NOTHING IS DONE? If the Tanner Crab Fishery Management Plan is not adopted, existing regulations will become increasingly inadequate to fulfill the mandates of multiple age

structure, flexible harvesting strategies, conservative management to prevent irreversible damage to the reproductive potential for each stock, protection of sensitive life history stages, minimizing handling of non-target segments of the stocks, retention of adequate brood stocks, and increasing the socioeconomic aspects of management.

If the loopholes and omissions in the gear regulations are not addressed, they will continue to be exploited by those who are willing to circumvent the intent of these regulations.

WHO IS LIKELY TO BENEFIT? Those most likely to benefit from adoption of the Tanner Crab Management Plan would be the fishing community in general. Guideline harvest levels set in conformance with the Board Policy will more closely reflect the probable abundance of crab by fishing district. This will permit harvest of the major stocks at levels more consistently approximating the exploitation rates set forth in the Tanner Crab Resource Management Policy. Processors will benefit because the potential for having to accommodate large numbers of unmarketable crab will be lessened.

WHO IS LIKELY TO SUFFER? Those who may suffer would likely be fishermen who decide to fish districts with high levels of competition, short seasons, and low catches. However, individuals who make the wrong choice in any given season will not necessarily continue to suffer as they could fish in other areas in succeeding seasons.

OTHER SOLUTIONS CONSIDERED? The proposed Tanner Crab Fisheries Management Plan presents many options and combinations which would still allow adherence to the basic concepts of the King and Tanner Crab Resource Management Policy. The status quo would allow the department to continue managing the resource, however, the Tanner Management Plan advocates a more proactive approach and definitive management strategy for Southeast Alaska.

PROPOSED BY: Alaska Department of Fish and Game (HQ-92-F-283)

1992/93 BOARD OF FISHERIES BRIEFING DOCUMENT

Title:	5 AAC 35.xxx. S.E. Alaska Tanner Crab Management Plan
Proposal No.	275
Page	190
Proposed by:	Alaska Department of Fish and Game
Commercial Fisheries Division Author:	Timothy Koeneman, Regional Shellfish Biologist Kenneth K. Imamura, Assistant Shellfish Biologist

SYNOPSIS

This document summarizes the Alaska Department of Fish and Game's management plan for the commercial Tanner crab fishery in Southeast Alaska. The plan is based on the Alaska Board of Fisheries "Policy on King and Tanner Crab Resource Management". It includes management measures supported by existing regulations and new management measures needed to address the rapidly changing nature of the fishery.

The department's proposed management plan will rely on long-term harvest rates to establish fishing time prior to the start of the season. Although this change in harvest strategy does not necessarily require a change in existing regulations, the department has submitted this proposal to obtain input from the public, the fishing fleet, industry, and the BOF. Modifications to existing regulations to better control bitter crab disease are addressed in department Proposal 276.

BACKGROUND

The Tanner crab fishery in Southeast Alaska is fully developed, with a fleet presently capable of taking the annual allowable harvest in about two weeks. The fishery for Tanner crab is based on the harvest of males over 5 1/2 inches (140 mm) carapace width during a season that is intended to protect sensitive life history stages such as molting and mating periods. In addition, a maximum harvest ceiling of 2,000,000 lbs, based on historic harvest trends, has been established for this area.

The Southeast Alaska fishery occurs in the relatively protected inshore waters south and east of Cape Fairweather and north of Dixon Entrance. The major Tanner crab fishing grounds are located in Districts 10, 11, 14, and 15 (Figure 1). Southeast Alaska is a superexclusive registration area with a 100 pot per vessel limit. The Tanner crab fishery is under limited entry with 109 permits eligible to participate. Recent seasons have been short, typically lasting about two weeks, with a continuing trend to even shorter periods (Figure 2).

Management of this fishery is becoming increasingly difficult with cuts in field research and sampling programs, steadily increasing effort, and the growing dependence of the seasonal harvest on recruitment. This management plan defines the issues facing management and proposes some new or modified regulatory language for more effective future management of this fishery.

MANAGEMENT ISSUES

The department's primary objective is to provide for proper stock management that is consistent with BOF policies and accepted management measures. Placing the key elements of the management plan in regulation will clearly identify the basis of management to the public and industry.

The original department proposal submitted to the BOF provided several options for managing the Tanner crab fishery in Southeast Alaska. By presenting different options, the department hoped to solicit input from the public, fishing fleet, the processing industry, and the BOF concerning a revision of the current management approach for this fishery. Some of the options listed in the original proposal are not recommended by the department for adoption. Each management option in the original proposal and the department's recommendation, is discussed below:

1. and 3. Establish optimum harvest levels by major fishing area, with preseason estimates of allowable harvest based on predicted exploitation rates.

   As the Tanner crab fishery has intensified and seasons have become shorter, it has become increasingly difficult for the department to manage on an inseason basis. Future management will emphasize preseason estimates of an acceptable harvest rate which will be used to estimate the appropriate season length. This will require evaluating the effects of past harvest rates and their consequences, determining a rate that provides for adequate retention of a cross-section of legal sized males, and conducting annual evaluations of response of the stock. Harvest rate management is not as flexible as in-season management. However, management must balance the benefits of inseason flexibility against the risks of local depletion because inseason data provides less precise indications of stock composition and abundance when seasons are very short. The department recommends that the harvest rate management approach be specified as an option in regulation.

   The current maximum harvest ceiling is set at 2,000,000 lbs. Examination of the catch data during the past decade, a period during which stock abundances have fluctuated widely, indicates that the current ceiling is appropriate during periods of moderate to high abundance and that a lower harvest level is more appropriate during periods of lower abundance. The harvest rate during the last decade ranged from 43 to 77 percent (Table 1) and rates in excess of 60 percent are probably not sustainable over the long-term. As a result, the department recommends retention of the existing 2,000,000 lb harvest ceiling.

2. Provide area closures to prevent conflicts with subsistence or personal use fisheries, to reduce the spread of bitter crab disease or other known pathogens, or overharvest of weak or declining stocks.

   The BOF's "Policy on King and Tanner Crab Management" specifies that areas may be closed to minimize the handling and unnecessary mortality on non-legal and/or molting crabs, or to prevent conflicts with other fisheries or stocks. In addition, to the BOF Policy, the Commissioner of ADF&G has authority to close all or part of a registration area when continued fishing effort would jeopardize the viability of Tanner crab stocks. Inclusion of similar regulatory language regarding area closures in the department's proposed Tanner crab management plan would clearly identify the criteria used to close areas.

4. Provide for similar storage requirements for pots and ring nets.

   Current regulations already provide for storage of Tanner crab ring nets similar to those for pot gear; this proposed change is not necessary.

ENFORCEMENT ISSUES

No significant increase in enforcement actions is anticipated if this proposal is adopted.

FISCAL NOTE

There should be no significant increase in fiscal costs for field programs or project costs as a result of adoption of the proposed regulations.

CONCLUSIONS AND RECOMMENDATIONS

The increasing efficiency and mobility of the Tanner crab fishing fleet has resulted in high harvest rates on major stocks. The department has no pre-season assessment programs for this fishery and cannot determine the probable contribution of the incoming recruitment class. Changes in the fishery are making it more difficult to determine the appropriate harvest levels during the fishing season. The department recommends that the management plan and the associated regulatory language be adopted to better address these problems. This would include the adoption of regulations to:

1. Provide for harvest rate management.
2. Provide for closures for areas exhibiting low levels of abundance.
3. Retention of the current 2,000,000 lb guideline harvest ceiling;

REGULATORY LANGUAGE

Should this proposal be adopted by the Board of Fisheries, the following regulatory language is suggested:

5 AAC 35.112. Southeast Alaska Tanner CRAB MANAGEMENT PLAN. (New Section) The department shall manage the Southeast Alaska Tanner crab fishery to insure compliance with the Board policy on king and Tanner crab resource management by

(1) determining appropriate harvest rates prior to the opening of the fishery. The harvest rate is the percentage of the legal males to be harvested in a given year. The harvest rate shall be based on long-term historical trends, stock composition, and on factors affecting the reproductive viability of the stock.

(2) restricting the allowable harvest to a maximum of 2,000,000 lbs.

(3) closing areas to minimize handling and unnecessary mortality of non-legal and/or molting crabs and to maintain an adequate abundance of various sizes of male and female crabs to provide for sustained harvests.

Table 1. Southeast Alaska 1983/84 - 1991/92 Tanner crab catch and estimated total abundance, annual estimated harvest rates, and composition of catch sample.

Season	Season Catch Pounds	Estimated Abundance Numbers	Estimated Abundance Pounds	Harvest Rate	Escapement (Numbers)
1983/84	1,590,644	998,600	2,470,700	64.4%	355,700
1984/85	1,122,008	1,100,700	2,631,600	42.6%	631,400
1985/86	984,486	517,600	1,274,200	77.3%	117,700
1986/87	1,120,545	610,200	1,477,500	75.8%	147,400
1987/88	1,305,936	779,200	1,871,400	69.8%	235,400
1988/89	1,564,484	960,200	2,409,800	64.9%	336,800
1989/90	1,873,052	1,408,000	3,496,000	53.6%	653,600
1990/91	2,181,384	1,401,000	3,594,800	60.7%	550,800
1991/92	2,045,766	1,059,000	2,805,500	72.9%	286,800
Avg/Tot	1,532,034	1,048,278	2,615,078	64.7%	3,028,800[1]

[1] Total does not include 1991/92 season

Catch composition and Molting Frequency Estimates:

Season	Composition of Catch Sublegals	Recruits	Post-Recruits	Abundance of Postrecruits
1983/84	2.8%	72.8%	24.4%	243,700
1984/85	6.1%	69.0%	24.8%	273,000
1985/86	6.9%	72.0%	21.1%	109,200
1986/87	6.0%	66.3%	27.6%	168,400
1987/88	6.3%	63.5%	30.2%	235,300
1988/89	5.5%	54.0%	40.5%	388,900
1989/90	6.1%	61.5%	32.4%	456,200
1990/91	4.2%	72.7%	23.2%	325,000
1991/92	3.8%	59.7%	36.5%	386,500
Avg/Tot	5.3%	65.7%	29.0%	2,342,500[2]

[2] Total does not include 1983/84 season.

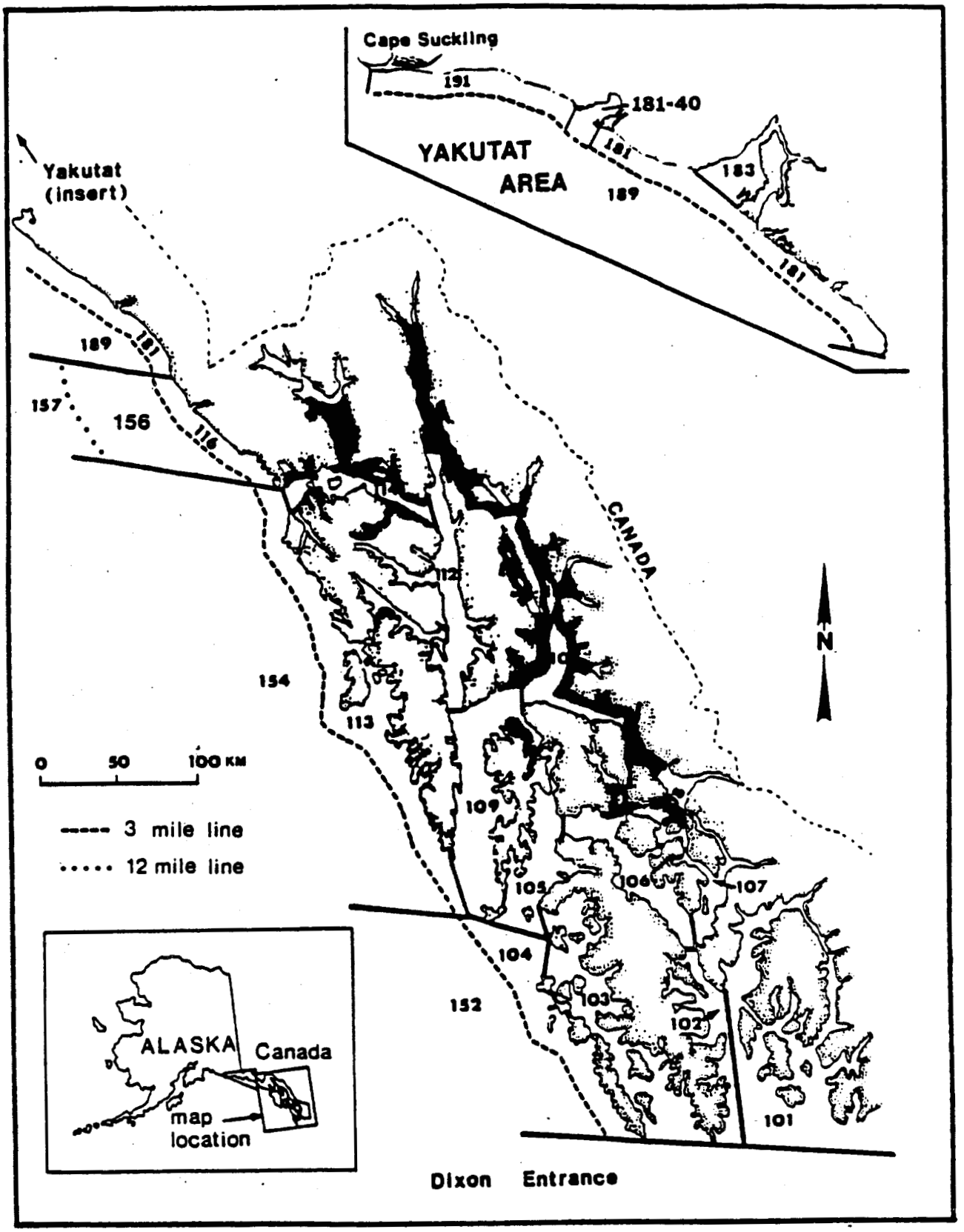
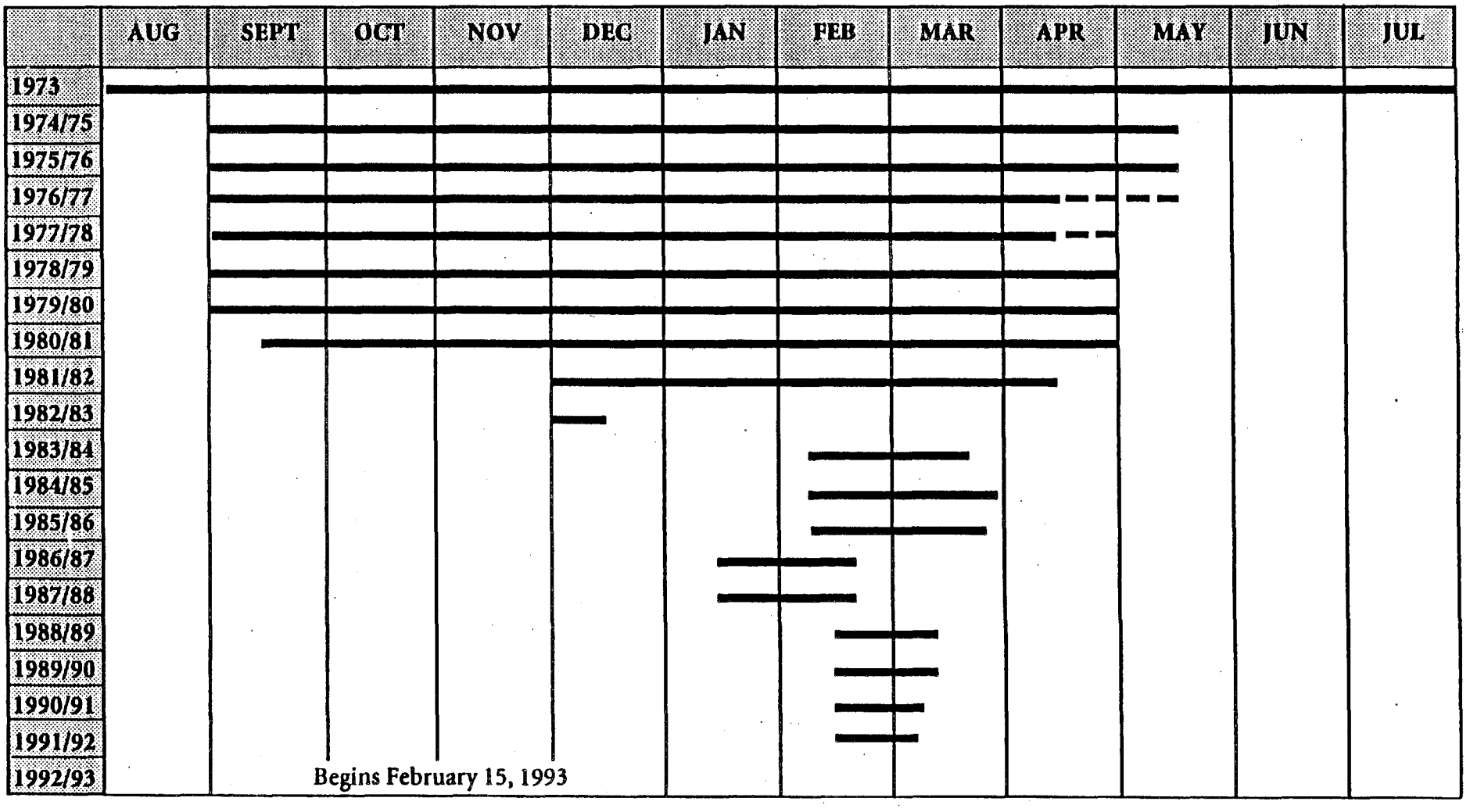


Figure 1 . Major fishing grounds for Tanner crab in Region I.

TRADITIONAL SOUTHEAST TANNER CRAB SEASONS



Solid lines indicate all Southeast.
Dashed lines indicate a portion of Southeast.

Figure 2. Traditional Southeast Alaska Tanner crab seasons. 1973 was the last year during which calendar years were used to denote seasons. Prior to the 1974/75 season, the Tanner crab fishery was essentially open all year.

BOARD OF FISHERIES ACTION
PROPOSAL 275

Action: FAILED 6 to 1

The Board was reluctant to seriously consider adoption of the Tanner management plan for two primary reasons. The first was technical.

The statewide king and Tanner crab policy was first submitted as a proposal in spring of 1990. Complete public review occurred at that time. While staff was under the impression that it would be adopted by reference for both king and Tanner, it was only referenced in regulation and adopted for king crab in 1990. It was not referenced in any of the Tanner crab regulations by an oversight and therefore not formally and legally adopted as a Tanner crab policy. The board cannot rely on policy unless it is referenced in regulation. Legal counsel to the Board indicated that there was sufficient legal notice to address the policy at this meeting and it was decided that the policy would be discussed during statewide deliberations, later in the board meeting. In part, due to this technicality, the management plan submitted was not deemed to be appropriate.

Secondly, several BOF members expressed concern that the plan was insufficiently detailed or refined. There were numerous comments that it did not include analysis of prerecruitment data. Omission of some specific items in the king and Tanner policy was criticized. Although no major changes in management were being proposed in the plan, one BOF member was not comfortable with the staff's assessment that the plan simply clarified some aspects of management and included no significant changes from existing management policies or regulations.

REGULATORY PROPOSAL 276

5 AAC 35.110. FISHING SEASONS FOR AREA A. AND 5 AAC 35.111. DISTRICT 15 Tanner CRAB MANAGEMENT PLAN

Consider management options to minimize the spread of bitter crab disease while providing for on-going fisheries in Southeast Alaska as follows:

5 AAC 35.110. FISHING SEASONS FOR AREA A.

1. Provide an earlier season date within the biologically acceptable period from September through February.

2. Provide criteria under which areas of known high incidence of this disease could be closed to commercial fishing. The department is requesting clarification of the conditions under which it could close areas to harvest if biological problems arise which pose risks to the continued viability of the overall resource.

5 AAC 35.111. DISTRICT 15 Tanner CRAB MANAGEMENT PLAN.

1. Modify the existing District 15 Tanner Crab Management Plan to permit selective harvest of marketable crab from this area of known high incidence of this disease. Suggested modifications include setting a season specific to District 15 that is primarily intended to allow early harvest of minimally sick crab. If such openings are contemplated, regulations for pre-registration, prohibition of pot storage, stringent reporting requirements, special permits, and prohibitions from concurrent participation in other crab fisheries will have to be considered to adequately manage and enforce this fishery.

PROBLEM: The commercial catch and retention of bitter crab during the Tanner crab fishery in Southeast Alaska results in transport of infected crab from localized areas of high rates of infection to other productive areas within the range of these species in Southeast Alaska.. This is suspected to have already happened in some areas such as Auke Bay. It also burdens processors with the need to dispose of infected crab, which are not marketable. Most processors voluntarily dispose of infected crab in sanitary landfills or via marine disposal after heat sterilization. Either of these methods minimizes the chance of the disease spreading but also is an uncompensated cost.

Recent research indicates that the incidence of disease does not increase over the September through February time period but its severity in infected crab does. That is, sick crab get sicker and more bitter as time progresses between September and February. An earlier season date could allow harvest of a portion of the sick crab that may still be marketable, either as sections or after further processing into analog products.

WHAT WILL HAPPEN IF NOTHING IS DONE? If this problem is not solved, the current risk of infecting a wider segment of the Tanner crab stocks in Southeast Alaska, than thereby the continued viability of this fishery will be in question. A season alteration could make approximately 150,000 lbs of Tanner crab marketable, when it is currently rejected.

WHO IS LIKELY TO BENEFIT? Regulations that reduce the possibility of retention of unmarketable sick crab by fishermen will benefit processors and fishermen. In addition, more fishing area would be made available to the fleet, with the addition of quantities of crab. The resource will most likely benefit from regulations that minimize the risk of spread of the disease.

WHO IS LIKELY TO SUFFER? Earlier seasons may interfere with other fishing opportunities for fishermen with interests in multiple fisheries such as halibut, black cod, Dungeness crab, winter bait herring, and winter dive fisheries. Closures of areas of high incidence would force fishermen who have eked out a season by sorting for uninfected crab to move to other fishing grounds.

An earlier season date may result in harvest of crabs that are less fully recovered from the annual molt and meat percentages relative to body size could be lower.

OTHER SOLUTIONS CONSIDERED? The existing District 15 Management Plan was an attempt at a solution to the bitter crab problem that had some shortcomings. More general proposals, such as those being submitted for the Tanner Crab Management Plan, may provide partial solutions to the problem.

PROPOSED BY: Alaska Department of Fish and Game (HQ=92-F-251)

Title:	5 AAC 35.110. Fishing Seasons for Area A and 5 AAC 35.111. District 15 Tanner Crab Management Plan.
Proposal No.	276
Page	192
Proposed by:	Alaska Department of Fish and Game
Commercial Fisheries Division Author:	Timothy Koeneman, Regional Shellfish Biologist Kenneth K. Imamura, Assistant Shellfish Biologist

SYNOPSIS

Bitter Crab Syndrome (BCS) is caused by a parasitic dinoflagellate that imparts a bitter taste and soft texture to the meat of infected Tanner (*Chionoecetes bairdi*) and snow (*C. opilio*) crabs during later stages of infection. The disease has significant biological and economic implications for the Southeast Alaska Tanner crab fishery, and may also affect other Alaskan Tanner crab fisheries.

The department's objectives are to 1) minimize the risk of spreading BCS to other uninfected stocks of Tanner crab, 2) to reduce the incidence of BCS in affected populations, and 3) to provide harvest opportunity for marketable crab. In this document, the department discusses options for achieving these objectives.

BACKGROUND

Bitter Crab Syndrome was first identified from Tanner crab captured during the commercial fishery in Lynn Canal (District 15) during the mid-1980s (Figure 1). This disease imparts a very bitter taste and soft flesh texture to infected Tanner crab. Since the initial identification, surveys have indicated that crab infected with this disease are located in many major fishing areas in Southeast Alaska (Figure 2). Available evidence suggests that the parasitic dinoflagellate causing the disease infects crab during the early spring. Infection intensity increases during the following year initial infection and eventually all major organs and tissues are involved. The dinoflagellate maintains both vegetative and dinospore stages. A portion of Tanner crab infected with BCS will early in the time sequence, when only vegetative stages are present. Dinospores are prevalent late in the second summer as the infection progresses. Virtually all crab die, and dinospores are liberated into the surrounding waters. Infected crab may die within a 12 to 18 month period after the onset of infection with BCS.

The presence of BCS has presented a number of problems to management of Tanner crab, particularly in Lynn Canal where the infection rate is very high. First, present fishing practices result in sorting and discarding crab that are obviously infected with BCS on the fishing grounds. Healthy or lightly-infected crab are retained on board for sale to processors or tenders. Subsequent sorting occurs while the vessel is underway to the next string of gear or geographic location. This practice results in: (1) as healthy crab are removed and diseased crab returned to the water, the rate of BCS infection of the remaining population can be expected to increase; (2) as discarding BCS infected crab occurs while the vessel is underway, BCS may be spread to other areas, and 3) as the fishery intensifies with shorter seasons, many fishermen that

previously fished in areas now known to harbor significant quantities of BCS infected crab, have shifted their efforts to other areas where there are less infected crab. Present regulations do not confine the BCS to known areas of concentration or reduce the level of BCS in areas with infected crab.

In an attempt to address the problems associated with BCS, the BOF adopted regulations in 1990 to provide for an earlier-season harvest of Lynn Canal stocks. The purpose of the early season was to gain information on potential management practices that might allow harvesting when crab are lightly-infected and potentially marketable. The District 15 Tanner Crab Management Plan adopted by the BOF (5AAC 35.111) provided for a special permit fishery every 45 days between August 15 and February 15 in Lynn Canal for a harvest of 20,000 lbs per opening. However, due to the lack of adequate controls, potential high effort levels, and enforcement problems with other open fisheries (e.g., brown king crab), the department has closed this fishery by emergency order for the past two years.

The continued need for information necessary for solutions to the BCS problem prompted the department to conduct independent research on BCS in District 15 during 1991. With the cooperation of industry and other agencies, crab were captured, analyzed for presence and intensity of infection, processed by industry with appropriate quality control considerations, and taste-tested at the Kodiak Fisheries Industrial and Technology Center. Results from this study indicate that an early season opening date could maximize the use of crabs which are lightly infected with BCS. Additionally, an earlier season would result in minimizing the amount of infected crab that would require proper disposal. Although an earlier season opening may be the best solution for the long term, there are some obvious disadvantages for industry. For example, catch rates are usually lower in the late fall. In addition, crab are generally lighter and smaller and there may be problems with marketing crab at this time of year. These factors would negatively impact fishermen and processors and they may not support the earlier season approach.

MANAGEMENT ISSUES

There are a limited number of options for controlling spread of BCS and reducing the incidence in areas of high infection rates. The following options are presented for consideration by the BOF:

1. Provide for closure of areas with high or significant rate of BCS infection.

   Closure of areas with high infection rates of BCS is the most practical method for minimizing the risk of spreading BCS to healthy Tanner crab stocks. This option does not represent a long-term

solution for BCS in Tanner crab because it would do nothing to alleviate the incidence of the disease in affected areas and it eliminates all harvest opportunity.

2. Restricted access, sorting, processing, and disposal requirements in areas with high levels of infection of BCS.

This option would reduce the potential for spread of BCS to other stocks and would provide for harvesting opportunities. Restricted access would be accomplished by a check-in/check-out procedure for both tenders and fishing vessels. Restricted access regulations combined with handling regulations (no sorting or discarding, holding and disposal requirements) could reduce the BCS infection rate among infected populations.

This option may reduce harvest opportunities by some fishing vessels and may provide some restrictions to tendering vessels. However, this option is preferred as it allows management to meet all three management objectives with a minimal of risk to the successful prosecution of the Southeast Alaska Tanner crab fishery.

3. Provide for an earlier season opening date coupled with restricted access, sorting, processing, and disposal requirements in areas with high levels of infection of BCS.

Harvesting Tanner crab infected with BCS earlier in the year may be the best long-term solution to the problems created by the disease. Under this option, fishing vessels would be less inclined to sort on the fishing grounds because the lightly infected crab would not be readily identified. Lightly-infected crab would also be more acceptable for processing and ultimate consumption.

Preliminary results from research conducted by the department in Lynn Canal indicates that the months of October and November represent the period of lowest infection rates and intensity of BCS (Figure 3). However, the number of crab per pot-lift and average carapace width is lower during the months of October and November compared to January or February and average section weight is slightly lower in October compared to later months (Figure 4). In addition, placing Southeast Alaska Tanner crab on the marketplace during October or November may create marketing problems for industry. The department does not recommend implementing this option until additional input is received from the fleet and processors regarding the potential negative impacts from an earlier season opening.

ENFORCEMENT ISSUES

There will probably be some additional costs for enforcement that would be best discussed by Fish and Wildlife Protection representatives.

FISCAL NOTE

Adoption of this proposal could result in additional expenditures by the Commercial Fisheries Division, depending on the course of action adopted by the BOF. For example, stringent check-in and check-out and area registration procedures would require an increased staff commitment.

CONCLUSIONS AND RECOMMENDATIONS

* The department recommends that the BOF adopt management measures for BCS in the Southeast Alaska Tanner crab fishery that includes restrictive access (area registration, check-in/check-out), handling, processing, and disposal requirements.

* An earlier season management approach for BCS should not be implemented until adequate input is obtained from the fishing fleet and processors regarding potential negative economic impacts.

* The existing District 15 management plan should be repealed.

REGULATORY LANGUAGE

The department has developed the following regulatory language for consideration by the BOF:

5 AAC 35.XXX. BITTER CRAB SYNDROME (BCS) MANAGEMENT AREAS. (New Section) The department shall manage Tanner crab stocks in Southeast Alaska to minimize the spread, and

reduce the incidence of "bitter crab syndrome". The department will identify areas of significant infection rates for Tanner crab as "bitter crab syndrome" management areas.

(a) fishing vessels intending to fish in "bitter crab syndrome" management areas, must register with a local representative of the department prior to fishing. All fishing vessels must land all Tanner crab harvested in that same area;

(b) tender operators intending to operate in "bitter crab syndrome" management areas, shall obtain a permit from a local representative of the department before operating. Permit requirements may include:

(1) tender operators holding Tanner crab landed in "bitter crab syndrome" management areas shall transport those crab directly to a processing facility;

(2) tender operators holding Tanner crab harvested or landed in a "bitter crab syndrome" management area may not have on board Tanner crab harvested in another area.

(3) tender operators shall hold Tanner crab infected with "bitter crab syndrome" in containers that do not contain circulating sea water.

5 AAC 35.111. DISTRICT 15 Tanner CRAB MANAGEMENT PLAN. Repealed effective.

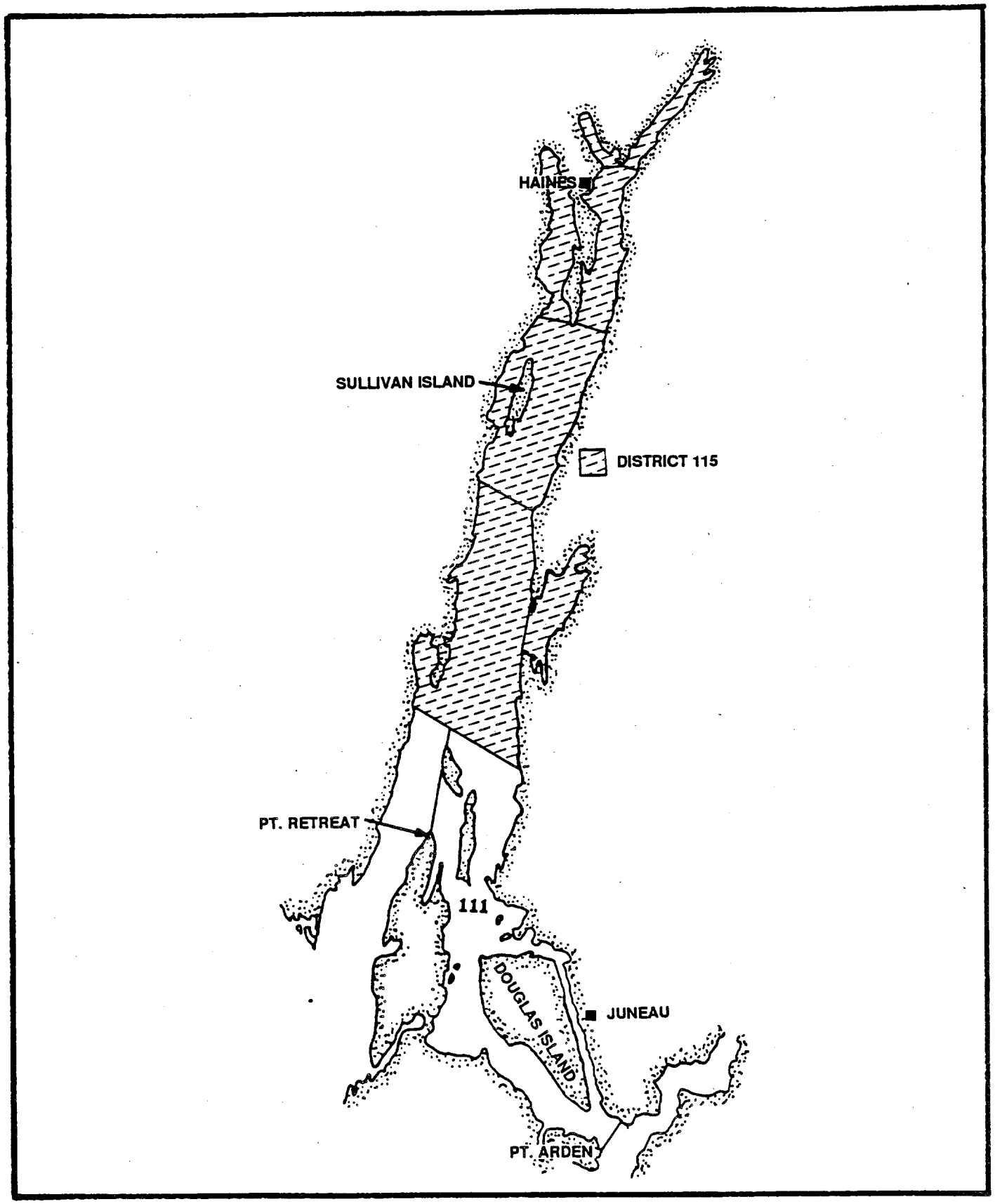


Figure 1. Proposal 276. District 15 Tanner crab management area.

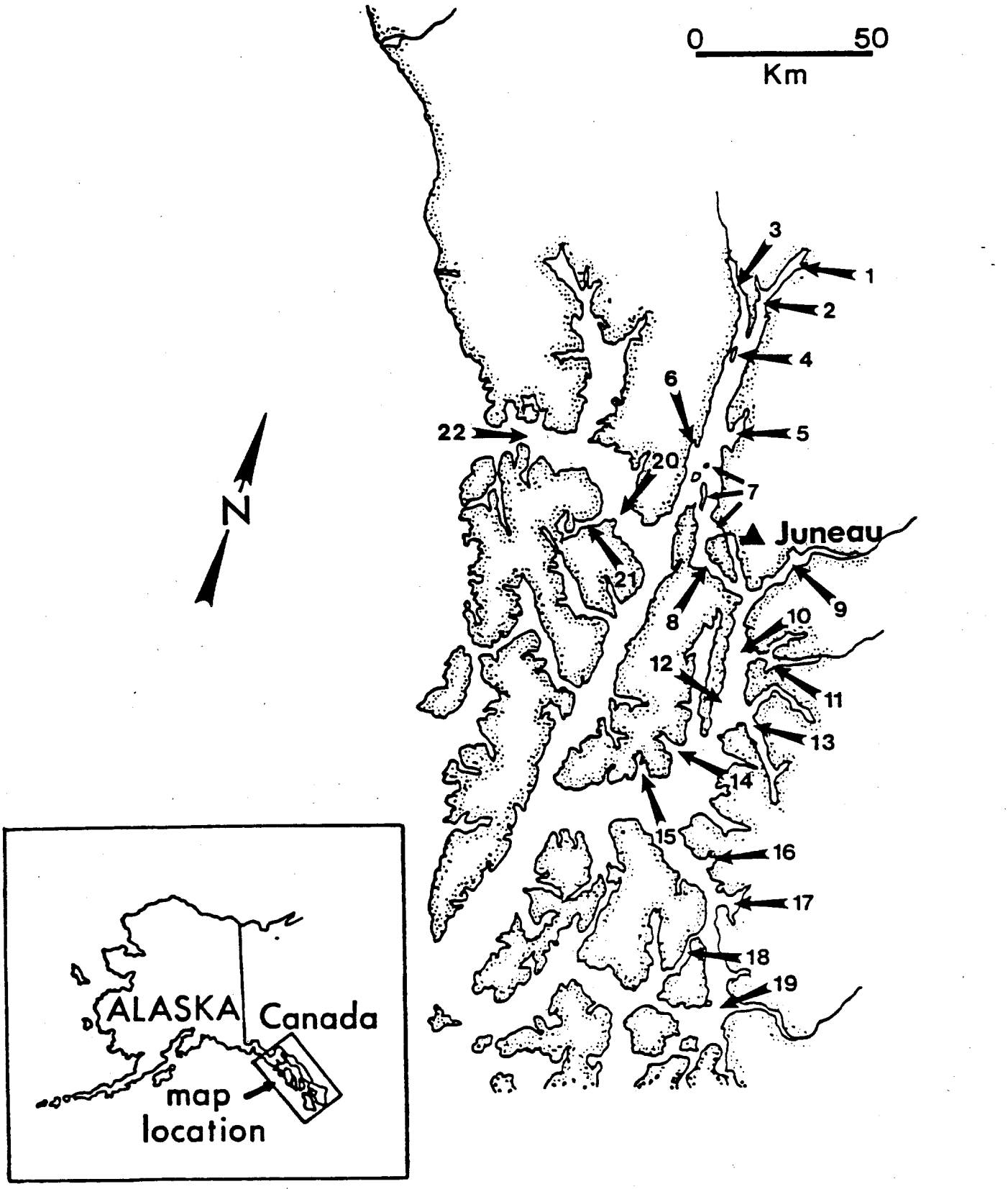


Figure 2. Site locations in Southeast Alaska where bitter crab syndrome occurs according to commercial catch census data (after Meyers, 1993).

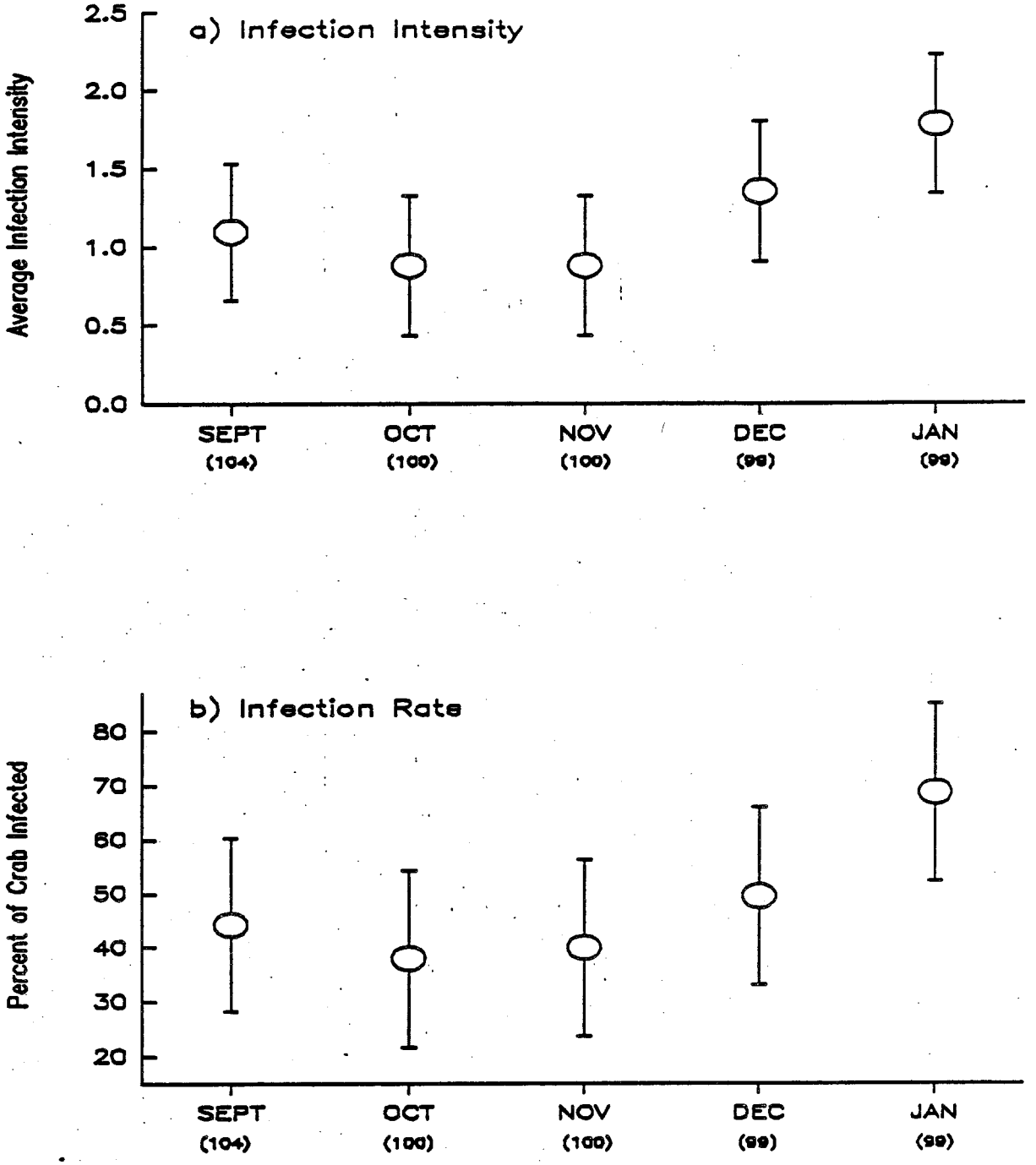


Figure 3. Average infection intensity (a) and infection rate (b) of tanner crab by month from September, 1991 to January, 1992. Infection rate is expressed as a percentage of tanner crabs infected with the bitter crab disease (infection intensities of 1 or greater). Error bars enclose 95% simultaneous confidence intervals. Sample sizes are in parentheses.

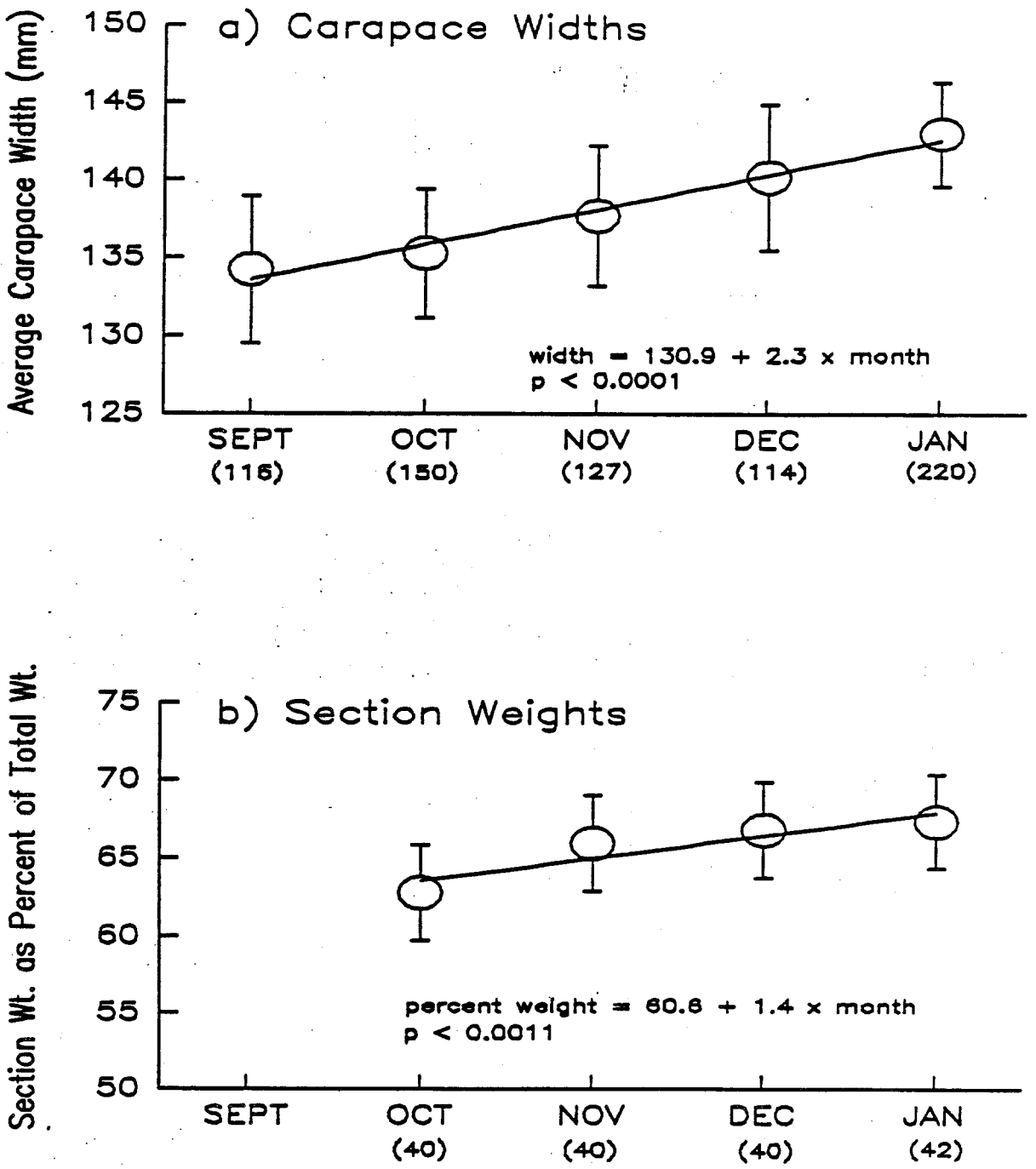


Figure 4. Average carapace width (a) and section weight as a proportion of total weight (b) of tanner crab by month from September to December, 1991. Lines are simple linear regressions where September = month 1 and January = month 5. Error bars enclose 95% simultaneous confidence intervals. Sample sizes are in parentheses.

BOARD OF FISHERIES ACTION
PROPOSAL 276

Action: ADOPTED 7 to 0

The BOF modified the language to eliminate the red flag of the word "disease" in the regulations. The adopted regulation provides for bitter crab syndrome (BCS) control measures in SE Alaska. The department can identify areas with significant infection rates of BCS, and can control fishing and tendering activities associated with these areas. Fishing vessels utilizing such areas must land all crab captured to a tender or processor in the area. Tenders, upon receiving crab in the area must proceed directly to a processing facility, must dry store any crab sorted out as BCS crab, and cannot accept crab from a "clean" area once they have departed the BCS area. Additionally, support of this proposal would repeal the opportunities for fishing in August and September, and would allow the department to open the fishery by Emergency Order after October 1st in areas identified for BCS control. Absence of industry (processor) comment regarding this proposal complicated Board discussion and decisions because they had no indication of processing preferences in late summer and early autumn or past observations on meat fullness and other market considerations. Some Board members questioned the acceptance of season changes because they were unsure of the affects on fishermen (gear and fishery conflicts) and processors (availability of tendering and processing facilities) of possible openings in August and September. The October/November window that was discussed is the time when symptoms of the disease are low grade and the potential of gear conflicts with the gillnet fleet are minimized.

ADOPTED REGULATORY LANGUAGE
PROPOSAL 276

5 AAC 35 is amended by adding a new section to read:

PROPOSAL 276B

5 AAC 35.117. BCS CONTROL MEASURES.

(a) The department shall manage tanner crab stocks in southeast Alaska to minimize the spread, and reduce the incidence of BCS. The department will identify areas of significant infection rates and may implement the following restrictions:

(b) In areas identified by the department, fishing vessels must check in with a local representative of the department prior to fishing and must check out with a local representative of the department prior to leaving the area. All fishing vessels must land all tanner crab harvested in that same area.

(c) Tender operators shall check in with a local representative of the department before operating. Tender operators holding tanner crab shall

(1) transport crab directly to a processing facility;

(2) not accept tanner crab from fishing vessels after leaving the area;

(3) hold tanner crab with BCS in containers that do not contain circulating sea water.

(d) By emergency order, the department may provide for an earlier season opening after October 1 in areas identified for BCS control. (Eff. __/__/93, Register).

Authority: AS 16.05.251

REGULATORY PROPOSAL 277

5 AAC 35.151. AREA A CLOSED WATERS.

Section 11-A closed to commercial taking of Tanner crabs.

PROBLEM: Close Section 11-A to commercial harvesting of Tanner crab. Crab habitat within this section is limited and extensive commercial harvesting of this area severely limits the availability of legal six crabs for personal use.

WHAT WILL HAPPEN IF NOTHING IS DONE? Juneau area residents will continue to find areas that are accessible by small boats blanketed by commercial gear, and be unable to find legal crabs.

WHO IS LIKELY TO BENEFIT? Many personal use fishermen in the Juneau area who use seafood to supplement their diet.

WHO IS LIKELY TO SUFFER? A few commercial crabber will have to travel farther from Juneau to harvest crabs.

OTHER SOLUTIONS CONSIDERED? We considered partial closure of 11-A, but decided this would unduly complicate regulations.

PROPOSED BY: Territorial Sportsmen, Inc. (HQ-92-F-171)

1992/93 BOARD OF FISHERIES BRIEFING DOCUMENT

Title: Closure of Section 11-A To Commercial Tanner Crab Fisheries

Proposal No. 277

Page 193

Proposed by: Territorial Sportsmen

Commercial Fisheries Division Author: Doug Mecum, Regional Management Biologist
Ken Imamura, Assistant Shellfish Biologist

SYNOPSIS

This proposal requests the closure of Section 11-A (Figure 1), to commercial harvest of Tanner crab. The companion proposal, number 280, requests the same closure for king crabs. Both proposals cite limited availability of crabs for personal use as the reason for the requests. The department maintains a neutral position on this allocative proposal.

BACKGROUND

The commercial fishery for Tanner crabs in Southeast Alaska opens each year on February 15. The 1991/92 season was closed after 16 days of fishing. For the last five years the commercial Tanner crab harvest for all of Southeast Alaska has fluctuated around the 2,000,000 lb maximum harvest quota specified in regulation. Available data indicates that the overall harvest rate on the legal male crab segment of the population has averaged about 60% in recent years.

Under existing regulations, the only area in Southeast Alaska that is closed to the commercial harvest of Tanner crab is a portion of Section 11-A, subdistrict 111-40, in the area known as Gastineau Channel (Figure 1). This area was closed by the Board of Fisheries many years ago to increase fishing opportunities for Juneau area non-commercial fisheries. The commercial harvest in all of Section 11-A has been as high as 590,000 lbs (1975/76 season) but has averaged about 170,000 lbs since 1968 (Table 1). Harvests and fishing effort have been relatively stable for the past ten years. The relative contribution of Section 11-A to the total Tanner crab harvest in all of Southeast, has fluctuated between 10% and 20% for the last five fishing seasons.

Under sport fishing regulations, non-residents may harvest and have in possession, up to five Tanner or Dungeness crab per day, in the combined aggregate. Only male Tanner crab greater than 5.5 inches in width of carapace may be legally taken and possessed. No more than four pots per person or a maximum of ten pots per vessel may be used to take shellfish at any time. Under personal use regulations, residents (with a valid sport fishing license) may harvest and have in possession, up to 30 Tanner crab per day. Only males are legal. There is no minimum size limit for Tanner crabs. No more than five pots per person or 10 pots per vessel may be used to take personal use shellfish at any time.

Commercial fishermen may retain any portion of their lawfully taken commercial catch of shellfish for their personal use. There is no limit to the number or amount of shellfish that may be retained for

personal use under this provision in the commercial fishing regulations. Depending on residency, commercial fishermen may also fish under sport or personal use regulations during periods closed to commercial harvest. However, they may not fish under any of these regulations for 14 days prior to a commercial fishery for that species.

The Board has determined that there is no customary and traditional use of king and Tanner crab in Southeast Alaska [5AAC 02.107 (a) through (l)]. As a result, there is no provision for subsistence harvest of these species.

Limited information exists on the non-commercial (sport and personal use) harvest of Tanner crab in Southeast Alaska. Harvest data is available from a survey of 30 communities throughout Southeast Alaska that was conducted in 1987 by the Division of Subsistence. This survey estimated a total non-commercial harvest in Southeast Alaska (excluding Juneau and Ketchikan) of approximately 28,000 lbs of Tanner crab. The Division of Sport Fisheries has obtained seasonal estimates (April through September) of the non-commercial harvest of king and Tanner crab in the Juneau area for the period from 1988 through 1992. The harvest of Tanner crab in the Juneau area, has declined over this period from about 3,000 Tanner crab (6,600 lbs) to 1,000 Tanner crab (2,200 lbs) in 1992 (Table 2). This decline in harvest may be related to 1) declining abundance of Tanner crab in the Juneau area, 2) increasing availability and harvest of the more highly preferred king crab, 3) increasing incidence of Tanner crab infected with bitter crab disease, or 4) some combination of these factors. Nearly all of the non-commercial harvest of Tanner crab in the Juneau area occurs in District 11 (Table 3). No estimates are available to determine the proportion of the non-commercial harvest of Tanner crab that is taken in Section 11-A.

MANAGEMENT ISSUES

Closure of the commercial Tanner crab fishery in Section 11-A may affect tracking of long-term trends in catch because this area has been used as an index of the relative strength of the Southeast Alaska stocks and is an important in-season indicator of stock status. Vessels would be forced to move to other open areas resulting in increased competition and effort occurring in more remote, exposed fishing grounds.

A closure of Section 11-A to commercial Tanner crab fishing would result in increased availability of Tanner crab to the non-commercial fishery and the non-commercial harvest would probably increase to some extent. However, this closure would not significantly reduce gear conflicts because the commercial fishery occurs for only a few weeks in February when non-commercial fishing effort is very low.

ENFORCEMENT ISSUES

No significant enforcement issues are anticipated if this proposal is adopted.

FISCAL NOTE

Adoption of this proposal by the Board should not result in any significant increases in expenditures by the department.

CONCLUSIONS AND RECOMMENDATIONS

* This is an allocative proposal and the department will maintain a neutral position.

REGULATORY LANGUAGE

Should this proposal be adopted by the Board of Fisheries, the following regulatory language is suggested:

5 AAC 35.151. AREA A CLOSED WATERS. In Area A, all waters of [Gastineau Channel north of a line from Marmion Island Light to the tip of Point Salisbury] Section 11-A are closed to the taking of Tanner crab.

Table 1. Historical commercial Tanner crab harvest from Section 11-A[1] and percent contribution to total Southeast harvest. [Proposal 277]

Season	Permits	Pounds	% of Southeast Harvest
1968/69	*	*	*
1969/70	11	107,026	16.2
1970/71	*	*	*
1971/72	*	*	*
1972/73	4	52,882	3.3
1973/74	20	327,282	25.0
1974/75	4	3,193	0.4
1975/76	10	589,798	27.4
1976/77	14	335,039	13.1
1977/78	10	130,224	6.1
1978/79	11	140,874	9.0
1979/80	9	64,832	3.6
1980/81	15	117,521	5.8
1981/82	10	174,218	5.0
1982/83	17	60,604	7.8
1983/84	14	127,381	7.8
1984/85	11	116,334	10.3
1985/86	15	201,617	20.0
1986/87	23	256,631	22.8
1987/88	23	254,105	19.1
1988/89	21	290,322	17.6
1989/90	22	184,635	9.3
1990/91	13	173,999	7.8
1991/92	20	320,203	15.2
Averages:		168,524	

[1] Subdistricts include 111-40, 111-41 and 111-50.

Table 2. Estimated shellfish effort and crab harvest for selected Southeast Alaska marine boat fisheries from 1988-1992.

	1988	1989	1990	1991	1992
Juneau					
Survey Period	4/11-9/25	4/24-9/24	4/23-9/23	4/15-9/29	4/27-9/27
Effort (boat-days)	2,287	2,652	2,622	3,812	5,411
Dungeness crab harvest	6,459	8,356	6,289	13,433	12,675
Tanner crab harvest	3,042	3,369	1,883	1,294	1,035
King crab harvest	552	1,849	1,960	2,467	5,673
Ketchikan					
Survey Period	4/11-9/25	4/24-9/24	5/07-9/23	4/29-9/29	4/27-9/27
Effort (boat-days)	1,398	508	614	1,394	1,387
Dungeness crab harvest	9,043	2,688	3,367	7,631	10,225
Tanner crab harvest	0	100	0	0	22
King crab harvest	0	0	0	0	0
Sitka					
Survey Period	4/11-9/25	4/24-7/02	None	None	None
Effort (boat-days)	635	76			
Dungeness crab harvest	1,642	241			
Tanner crab harvest	10	0			
King crab harvest	26	0			
Petersburg					
Survey Period	4/11-7/17	4/10-7/16	None	None	5/11-7/19
Effort (boat-days)	171	103			282
Dungeness crab harvest	939	501			347
Tanner crab harvest	249	31			778
King crab harvest	0	0			0
Wrangell					
Survey Period	4/11-7/17	4/24-7/16	None	None	5/11-7/19
Effort (boat-days)	107	207			144
Dungeness crab harvest	868	887			773
Tanner crab harvest	60	0			0
King crab harvest	0	0			0
Haines					
Survey Period	4/11-7/10	4/24-6/25	None	None	None
Effort (boat-days)	188	16			
Dungeness crab harvest	257	223			
Tanner crab harvest	254	0			
King crab harvest	0	0			
Craig/Klawock					
Survey Period	None	None	None	None	5/11-7/19
Effort (boat-days)					124
Dungeness crab harvest					694
Tanner crab harvest					0
King crab harvest					0

Table 3. Juneau area sport/personal use shellfish harvests in District 11 for 1991 and 1992.

Year	Species/ Effort	Total Harvest	District 111 Harvest	Percent of Total
1991	King Crab	2,467	2,258	92%
	Tanner Crab	1,294	1,252	97%
	Boat Days	3,812	3,072	81%
1992	King Crab	5,673	5,340	94%
	Tanner Crab	1,035	1,031	99.6%
	Boat Days	5,411	4,194	78%

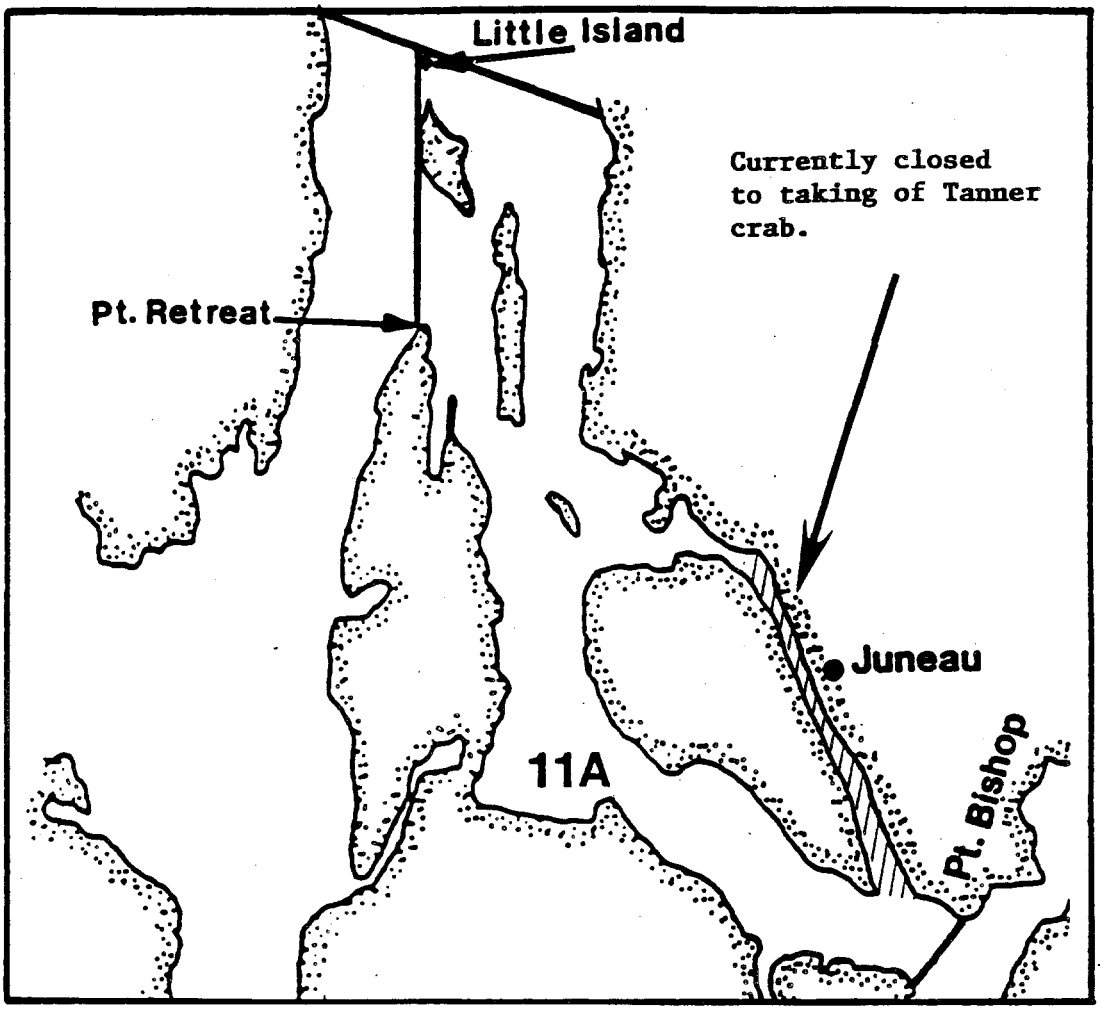


Figure 1. Proposal 277 requests the closure of Section 11-A to commercial harvest of Tanner crab.

BOARD OF FISHERIES ACTION
PROPOSAL 277

Action: FAILED 7 to 0

The BOF viewed this proposal as vague and having very little justification for a closure. There was criticism of the statement that the area was "blanketed" with commercial gear when there traditionally is only a two week Tanner fishery. Since a major portion of the Southeast commercial harvest is taken from the proposed closed area, this was thought to be disruptive to the fleet. One board member recalled that local advisory committees that commented on this proposal were opposed to it as well.

REGULATORY PROPOSAL 278

5 AAC 34.XXX. Southeast Alaska RED KING CRAB MANAGEMENT PLAN.

Develop a management plan for red king crab in Southeast Alaska as follows:

5 AAC 34.XXX. Southeast Alaska RED KING CRAB MANAGEMENT PLAN.

The following options are provided to solicit input from the public and industry to the Board of Fisheries concerning a revision of the current management approach for red king crab in Southeast Alaska:

1. Provide for retention and sale of infected crab, regardless of size and sex.

2. Provide for retention and sale of infected crab, regardless of size and sex.

3. Adjust the current threshold level downward to 200,000 lbs.

4. Establish a guideline harvest level by district based upon either survey results or historic harvest data.

5. Reduce the current pot limit.

6. Eliminate pre-season pot storage.

7. Provide for completion and submission of mandatory logbook information.

8. Provide for a limited test fishery by emergency order, with a restricted pot limit, gear storage requirements, and fishing time.

9. Provide for closed waters by emergency order in areas with low abundance of crab based upon survey information.

10. Provide for a registration deadline.

11. Provide for registration by fishing district.

PROBLEM: Red king crab have not been fished in Southeast Alaska since the 1984/85 fishing season due to generally depressed stock conditions. Stock conditions are improving in some localized areas but remain very depressed in other once- productive areas. Future surveys may indicate sufficient recovery of some stocks to push the overall, area-wide estimate of available legal male crab above the 300,000 lb minimum threshold level necessary to have an opening.

Current regulations imply that openings in the Southeast Alaska red king crab fishery are to be area-wide with little consideration for the relative strength or weakness of specific stocks. Past application of this approach was partially responsible for local depletion of some stocks. Also, the fishing power of the available fleet has grown tremendously since the last red king crab fishery. This combination of circumstances would make it very difficult to manage a fishery for small harvests from productive areas while providing adequate protection for weak or depressed stocks.

Current regulations and available information are not sufficiently specific to permit conservative management that is consistent with the current Policy on King and Tanner Crab Resource Management.

One, all, or various combinations listed above could be utilized to solve problems associated with this fishery. Some of these options have been suggested by industry, and some are allocative. The underlying purpose is to allow at least limited harvest of portions of strong stocks while providing a high degree of protection to those which are more slowly recovering or remain depleted. Available information strongly suggests the existence of separate stocks. Future regulations could be tailored to provide for individual stock management.

WHAT WILL HAPPEN IF NOTHING IS DONE? Existing regulations regarding this problem are limited to one that directs a pot reduction if the projected guideline harvest range is between 300,000 to 400,000 lbs. This implies that if the department's survey results in an estimate of at least 300,000 lbs of red king crab available for harvest in Southeast Alaska, the department is directed to open the fishery. The regulations are inexplicit regarding additional measures that the department may employ to protect weaker stocks from over- exploitation and local depletion.

WHO IS LIKELY TO BENEFIT? These potential solutions were developed to provide more biologically responsible management for the commercial red king crab fishery. Obviously, better management will benefit the commercial red king crab fisherman who desire to have a stable and long-term participation in this fishery. Personal use and subsistence fisherman for this species should also benefit from these changes since future management will have a reduced risk of overharvest.

WHO IS LIKELY TO SUFFER? Some commercial fishermen may be inconvenienced by the time lines and regulations necessary to control fishing effort on a limited resource, by prohibition of stored pots on the grounds prior to the season opening, and fleet efficiency may decline based upon a reduced pot limit.

OTHER SOLUTIONS CONSIDERED? Fleet members have discussed a lottery system to set a lower level of vessels participating in the fishery during a particular season.

PROPOSED BY: Alaska Department of Fish and Game (HQ-92-F-281)

1992/93 BOARD OF FISHERIES BRIEFING DOCUMENT

Title:	*5 AAC 34.1XX. Southeast Alaska RED KING CRAB MANAGEMENT PLAN*
Proposal No.	278
Page	194
Proposed by:	Alaska Department of Fish and Game
Commercial Fisheries Division Author:	Timothy Koeneman, Regional Shellfish Biologist Doug Mecum, Regional Management Biologist

SYNOPSIS

This document summarizes the Alaska Department of Fish and Game's proposed management plan for the commercial red king crab fishery in Statistical Area A (Southeast Alaska). The department developed this plan based on the Board of Fisheries (BOF) "Policy on King and Tanner Crab Resource Management". The plan describes management measures, rationale, and regulations that are necessary to achieve consistency with BOF policy, existing stock conditions, and the department's management capabilities.

BACKGROUND

Red king crab are harvested in the protected bays, inlets, and adjacent shorelines of straits and sounds in the northern waters of Southeast Alaska at depths of less than 150 fathoms. The major fishing grounds are mainly located in fishing Districts 9 through 15 (Figure 1). Small quantities of blue king crab are also harvested incidentally. Vessels participating in this fishery are primarily salmon tenders, limit seine vessels (58' total length), and larger gillnet vessels. Fishing gear has gradually evolved to include side-loading king crab pots (7' x 7' x 30") and top-loading pyramid, or cone style gear. Current regulations provide for each vessel to fish 40 pots if the GHL is between 300,000 and 400,000 lbs, and 100 pots if the GHL exceeds 400,000 lbs. Fleet size has been limited by the Alaska Commercial Fisheries Entry Commission.

The red king crab fishery in Southeast Alaska began around 1960 and was fully developed by the mid-1970's. The fishery is based on the harvest of male crab over seven inches (178 mm) in carapace width during a season that is intended to protect sensitive life history stages such as molting, mating, and egg-hatch. The department conducts a pre-season assessment survey to determine if a regulatory minimum of 300,000 lbs is available for harvest. The survey is also utilized to evaluate the condition of non-legal portions of the stock and the reproductive condition of mature female crab.

The commercial red king crab fishery in Southeast was very intense during the period from 1979 through 1984. Effort increased dramatically from about 40 fishing vessels in 1980 to 100 vessels during the 1983 and 1984 seasons (Figure 2). The fishery has been closed since 1984 due to low stock abundance. Assessment surveys conducted in recent years indicate that stocks are rebuilding in some areas but showing little improvement in others. The department feels that successful prosecution of fisheries in future years will have to be based on reliable stock assessment information and a more conservative

management strategy than was previously employed. Adoption of regulations implementing the proposed management plan will assist the department in managing the fishery consistent with the current BOF policy and will provide industry and the public with increased knowledge of the mechanisms and rationale for management actions.

MANAGEMENT ISSUES

The department's primary objective is to provide for proper stock management that is consistent with BOF policies and accepted management measures. Placing the key elements of the management plan in regulation will clearly identify the basis of management to the public and industry. Additionally, 5AAC 34.080. HARVEST STRATEGY, specifies that the BOF must review any changes the department may propose to current harvest strategies.

The original department proposal submitted to the BOF provided several options for managing the red king fishery in Southeast Alaska. By presenting different options, the department hoped to solicit input from the public, fishing fleet, the processing industry, and the BOF concerning a revision of the current management approach for this fishery. Several of the options listed in the original proposal are not recommended by the department for adoption. Each management option in the original proposal and the department's recommendation, is discussed below:

1. Provide for a system of rotating season opening dates within the biological window to ensure that the same portion of a stock is not targeted in consecutive seasons.

   Existing information is not sufficient to identify the period of time when each stock congregates in each bay. Because this information is not available for each stock, an appropriate rotating system cannot be determined at this time. As a result, the department does not recommend inclusion of this concept in the management plan.

2. Provide for retention and sale of infected crab, regardless of size and sex.

   Crab infected with the barnacle parasite *Briarosaccus callosus* are not reproductively viable and experience reduced growth. Additionally, these infected crab serve as hosts for further proliferation of the disease. It is hoped that removal of parasitized crab from the general population may increase stock abundance and growth. The department recommends inclusion of this measure in the management plan.

3. Adjust the current threshold level downward to 200,000 lbs.

The existing minimum threshold regulation specifies that a minimum of 300,000 lbs of legal male red king crab must be available for harvest before a commercial fishery is allowed. The minimum threshold was adopted by the BOF based on input from the fleet and industry that harvests below this level would not be economically viable.

A reduction in the current threshold level would result in the prosecution of a fishery at reduced stock levels. The recent poor stock conditions are partially a result of localized depletion of small stocks and exploitation at levels too high to sustain. A reduction in the threshold level could result in further depletion of localized stocks. Therefore, the department does not recommend lowering the current minimum threshold.

4. Establish a guideline harvest level by district based upon either survey results or historic harvest data.

Management of the red king fishery by specific district GHL's would require the ability to control entry of effort in each district. This could be accomplished through registration deadlines and "superexclusive" district registration. With a known level of effort, appropriate fishing time could be allocated to maintain the harvest and prevent local depletion. This type of system would represent a radical departure from the current management system and it is unlikely that the fishing fleet would support it. The department does not recommend inclusion of this option at this time. Closure of bays which demonstrate poor stock conditions, and a harvest rate and GHL approach is a more appropriate method of management.

5. Reduce the current pot limit.

Current figures from the Commercial Fisheries Entry Commission show that 105 permits could potentially participate in the red king crab fishery in Southeast Alaska. This level of effort is considerably higher than what the fishery previously supported. In addition, the fleet fishing power (efficiency) appears to have increased significantly since the 1984/85 fishing season when 100 pots per vessel were utilized. This is demonstrated by the fishing effort and catch trends in the Tanner crab fleet, most of which previously participated in the red king crab fishery. Analysis of the red king crab harvest rate data indicates that a 20 pot limit is appropriate if a minimum fishing period of seven days is desirable (Figures 3 and 4). A seven day season has been suggested by some fleet members as the minimum practical season length for red king crab (see Proposal 282). The department recommends a reduction in the current pot limit to 20 pots per vessel when the GHL is between 300,000 and 400,000 lbs.

6. Eliminate preseason pot storage.

Adoption of this provision could reduce or eliminate some enforcement and fair-start problems. However, smaller vessels that choose to fish larger, heavier pots would then be at a disadvantage. This aspect of the proposal is allocative and the department does not recommend adoption of this provision.

7. Provide for completion and submission of mandatory logbook information.

Mandatory logbooks could provide information to compliment department stock assessment surveys or test fishing programs. However, the department does not have sufficient staff to support and administer a mandatory logbook program at this time and this provision is not recommended for adoption.

8. Provide for a limited test fishery by emergency order, with a restricted pot limit, gear storage requirements, and fishing time.

This option was submitted by the department as an alternative method to assess stock conditions, in light of the decommissioning of the Southeast Region research vessel. However, stock assessment by test fishing presents a number of problems, including the lack of a historic comparative database and the inability to control fishing effort. The department does not support this option. Stock assessment surveys will be accomplished with the recently purchased R/V Medeia.

9. Provide for closed waters by emergency order in areas with low abundance of crab based upon survey information.

Previous fisheries were conducted without closing areas known to have low or declining abundances of red king crab. Given current fleet size, the potential exists that any known fishing area could receive significant fishing effort. Some stocks should not be fished until abundance increases. Although the department already has sufficient authority to close areas based on conservation concerns (see 5AAC 34.035. CLOSURE OF REGISTRATION AREAS), adoption of this language in the management plan will notify the fleet and industry that areas where poor stock conditions are observed will be closed. The department recommends adoption of this provision.

10. and 11. Provide for a registration deadline and provide for registration by fishing district.

These measures represent a means to control fishing effort by district. Administering this registration system would be very complicated and must consider survey information, provisions for re-registration, and other factors. The department does not recommend adoption of this provision at this time. Closures of bays which demonstrate poor stock conditions coupled with a harvest rate management approach should be adequate to prevent overharvest of local stocks.

ENFORCEMENT ISSUES

There should be no significant increase in enforcement activities as a result of adoption of the recommended portions of this proposal as regulation.

FISCAL NOTE

There may be increased costs to the department if the recommended portions of this proposal are adopted into regulation. For example, it may be necessary to increase commercial catch sampling to more accurately determine fishing effort, catch success, and age/size composition of the landed catch. Increased effort may also be needed for stock assessment surveys.

CONCLUSIONS AND RECOMMENDATIONS

The department recommends adoption of the following management measures in the red king crab management plan for Southeast Alaska:

1. Provide for a management plan which includes a minimum threshold of 300,000 lbs of legal males, a harvest rate necessary to provide sustained harvests, determination of a guideline harvest level prior to each fishing season based on survey data (if available) and historic harvest information;

2. Allow the retention and sale of red king crab infected with the barnacle parasite *Briarosaccus callosus*, regardless of sex or size;

3. Establish that areas with low stock abundance are to be closed by emergency order;

4. Establish emergency order authority to implement a reduced pot limit of 20 pots per vessel;

5. Repeal the existing guideline harvest range for red king crab.

REGULATORY LANGUAGE

The following regulatory language is recommended to implement the department's proposed management plan:

5AAC 34.112. HARVEST OF PARASITIZED [BLUE] KING CRAB. Notwithstanding the provisions of 5AAC 34.060 and 5AAC 34.065 all [blue] king crab, male, female and sub-legal, that have the barnacle parasite *Briarosaccus callosus* or a scar of the parasite under the flap, may be taken for commercial sale during open commercial fishing seasons. The external reproductive organ of the parasite must be removed from all [female and sub-legal] crab before the crab is placed in a live tank and must be retained on board the vessel, out of contact with sea water, and transferred to a processor for disposal.

5AAC 34.125. LAWFUL GEAR FOR AREA A. (c) During a king crab season in the following waters, an aggregate of no more than 100 king and Tanner crab pots may be operated from a vessel registered to fish for king crab, except that an aggregate of no more than [40] <u>20</u> king or Tanner crab pots may be operated from a vessel registered to fish for red king crab during the general red king crab season<u>, unless changed by emergency order</u> [if the projected guideline harvest level is 300,000 to 400,000 lbs]:

5AAC 34.1XX. Southeast Alaska RED KING CRAB MANAGEMENT PLAN. <u>(New Section)</u>.
(a) The Southeast Alaska red king crab fishery shall be managed consistent with the Alaska Board of Fisheries "Policy on King and Tanner Crab Resource Management" and according to the principles set forth in this section.

(b) Areas will be closed if the abundance of various sizes of male and female crabs is inadequate to provide for sustained harvests, or when potentially high effort precludes an orderly fishery.

(c) The fishery will be closed if the estimate of the available harvest is below the minimum threshold of 300,000 lbs of legal male red king crab.

(d) An appropriate harvest rate will be determined prior to the opening of the fishery. The harvest rate is the percentage of the legal males that can be harvested while providing for the long term reproductive viability of red king crab stocks. The harvest rate will be based on estimates of abundance of the various size classes of male and female crabs, and on factors affecting the reproductive viability of the stock.

(e) The guideline harvest level will be determined prior to each fishing season, based on the harvest rate policy. The guideline harvest level is the sum of estimates of sustainable harvests for each fishing district. If stock assessment data are not available, the guideline harvest level will be based on historical fishery performance, catch, and population information. A lack of adequate information will result in conservative management.

5AAC 34.115. GUIDELINE HARVEST RANGES FOR AREA A (a) Repealed effective _____.

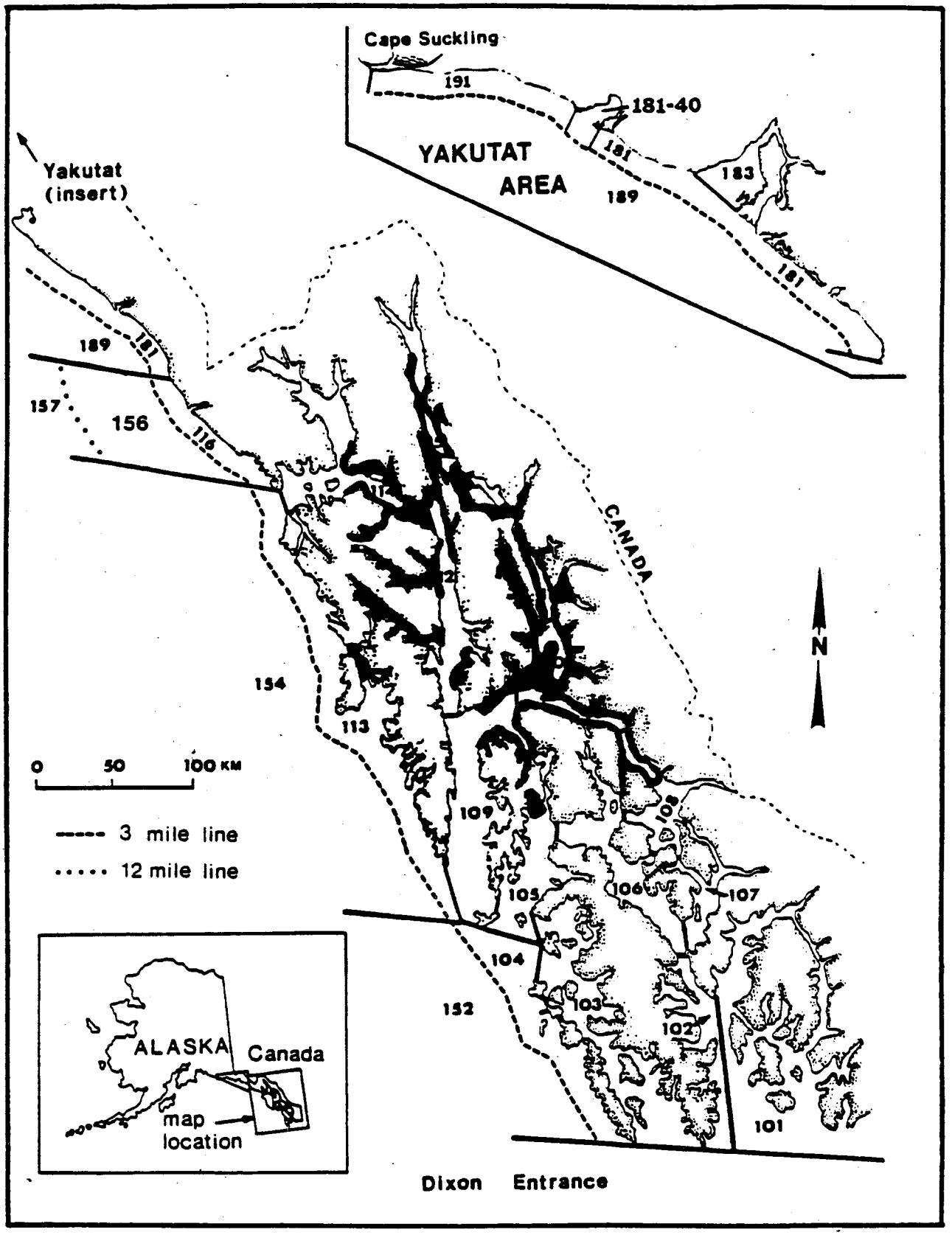


Figure 1. Major fishing grounds for red king crab in Region I.

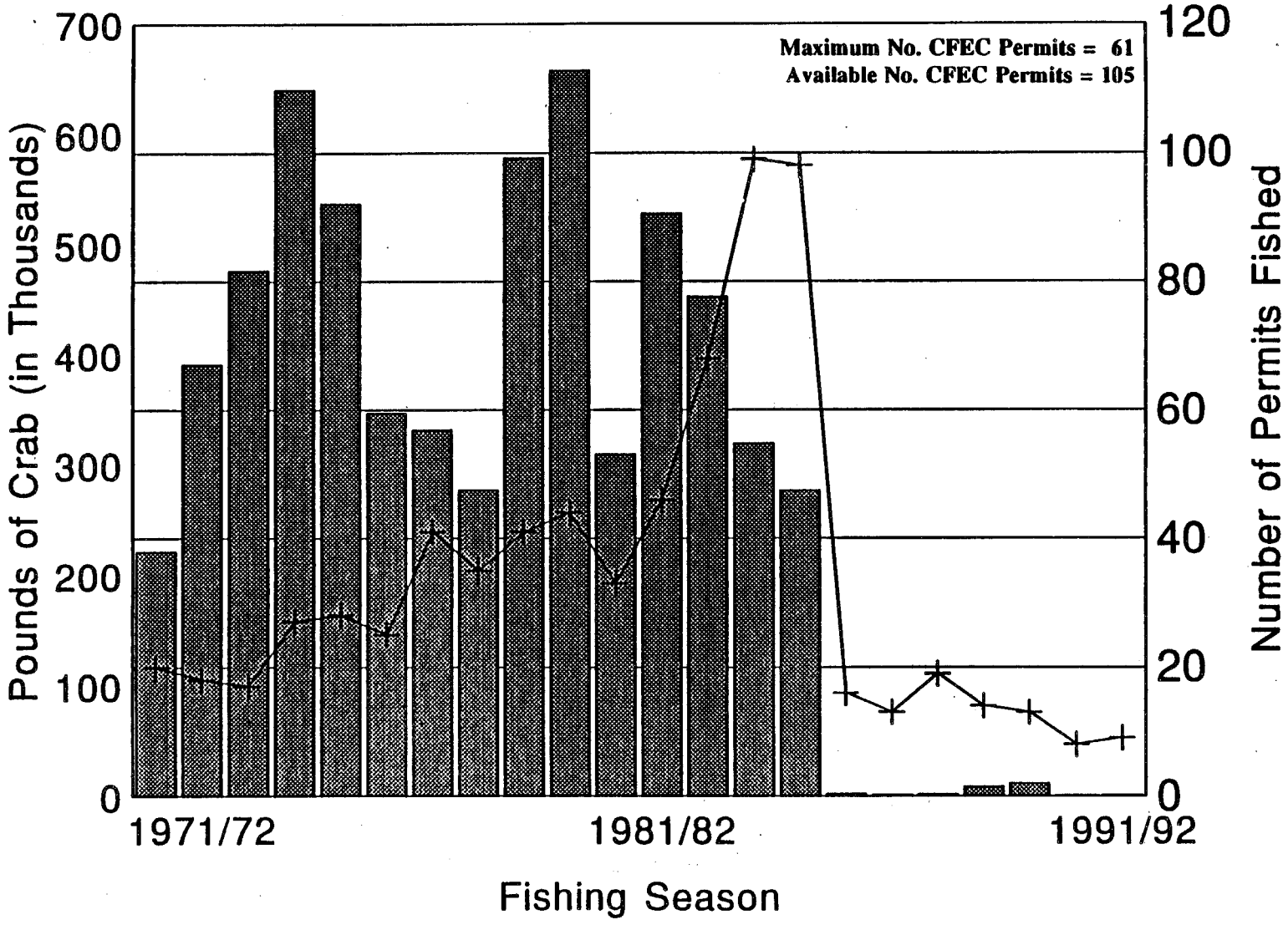


Figure 2. Southeast Alaska red and blue king crab catch and the number of permits fished from the 1970/71 through the 1991/92 seasons.

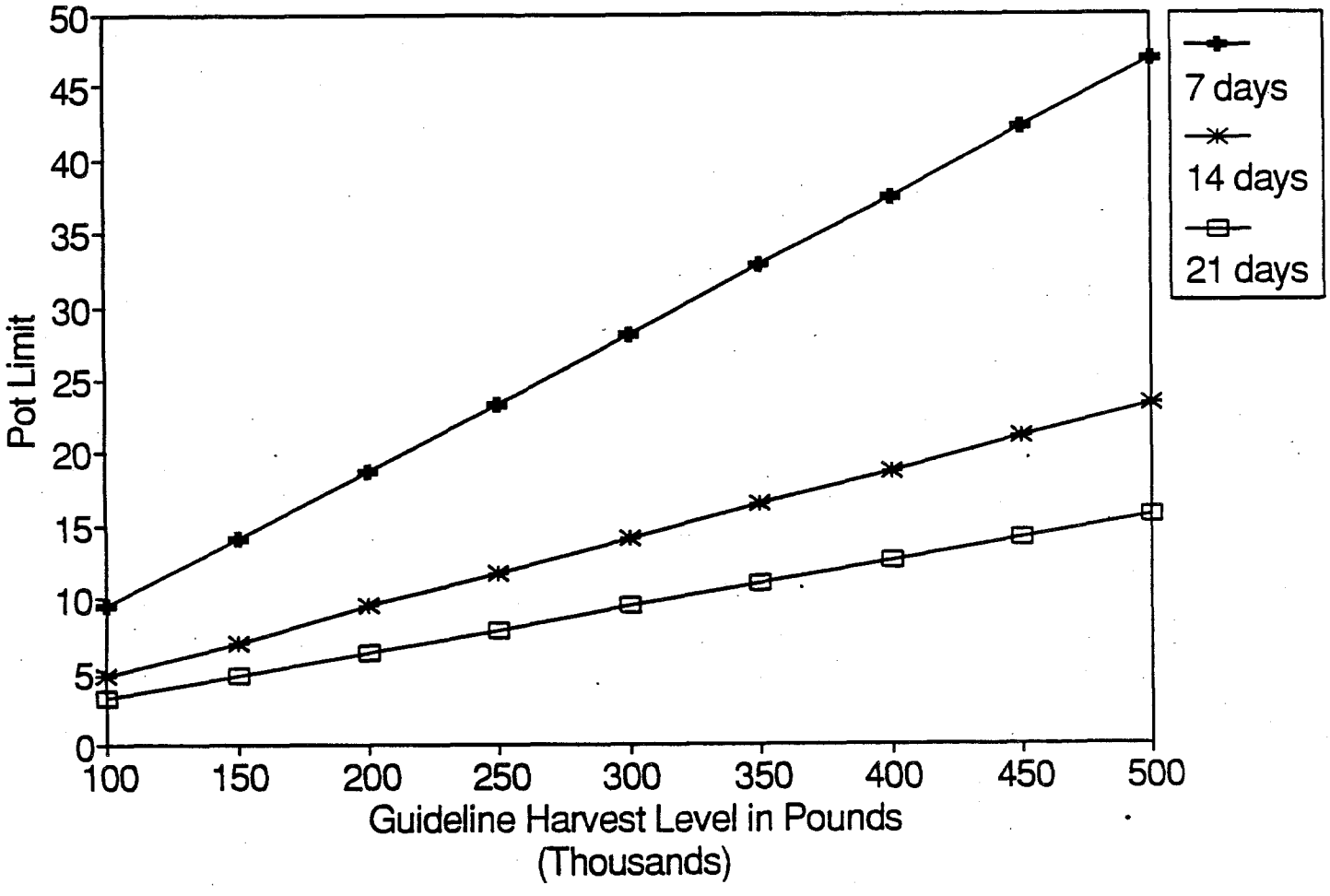


Figure 3. The number of pots per boat needed to attain given guideline harvest levels for 1, 2, and 3 week seasons. The data are projections for a "70% core fleet catch rate," which is the number of pounds caught per boat per day by the high-catch boats, accounting for 70% of the catch in the 1984/1985 season. That rate was 1453 pounds per boat per day. This graph shows that a pot limit of 40 could allow a projected catch of approximately 427,000 pounds with a season as short as 7 days. A lower pot limit of 20 would result in a projected catch of about 214,000 in seven days, or 300,000 pounds after 10 days. In effect, the lower pot limit allows for longer seasons and more precise management.

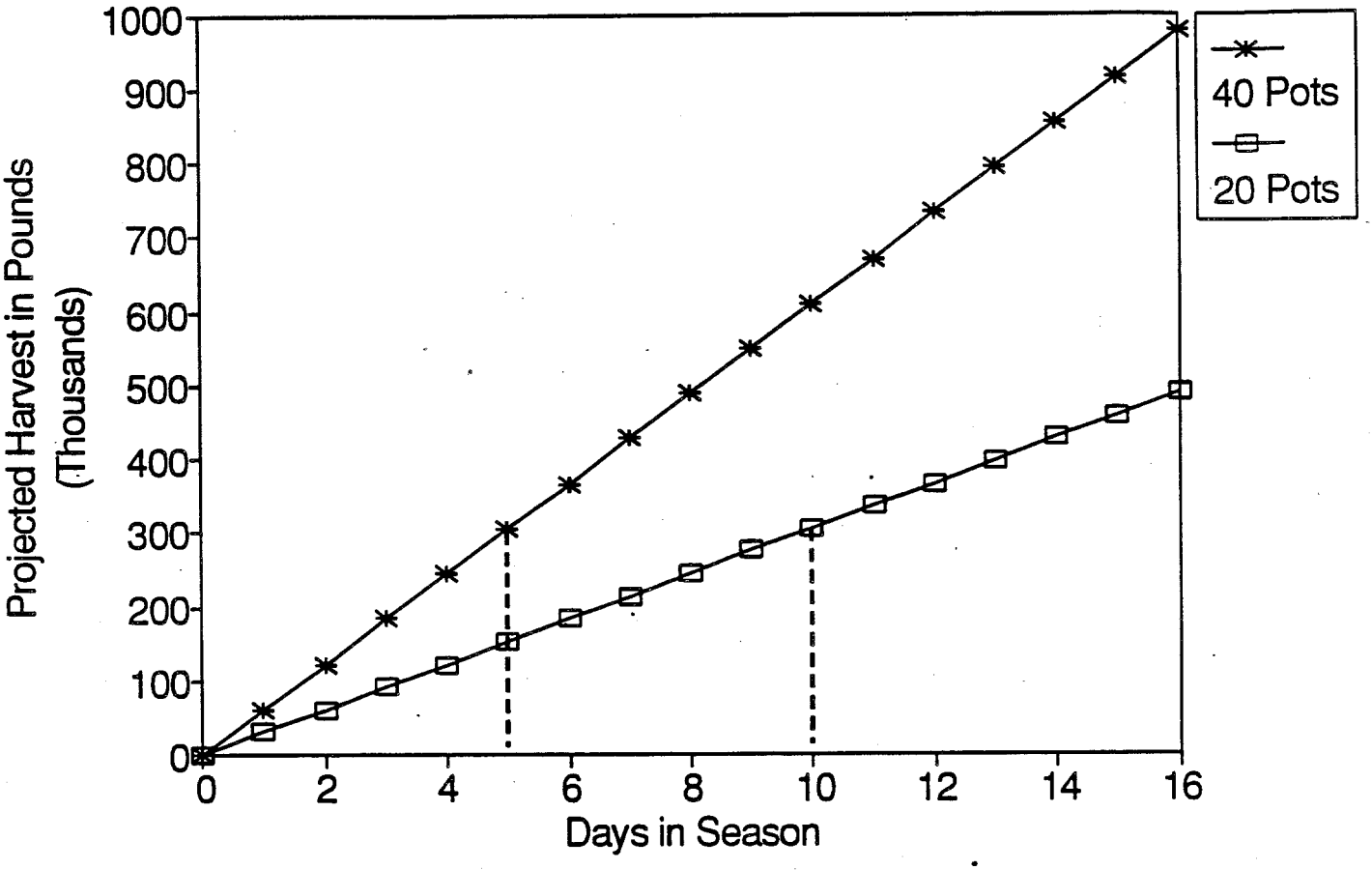


Figure 4. The projected crab harvest as a function of days for 20 and 40 pot limits. These projections assume a catch rate of 1453 pounds per boat per day (70% core fleet rate). A 40 pot limit allows a projected catch of 300,000 pounds in just 5 days, whereas a 20 pot limit lengthens the season to 10 days.

BOARD OF FISHERIES ACTION
PROPOSAL 278

Action: ADOPTED 7 to 0

Clarification was made to BOF members that the eleven options in the proposal submitted were provided for discussion and were not listed as staff recommendations. All options recommended by staff in the briefing document were adopted with slightly modified language. The management plan for Southeast Alaska red king crab stocks:

1. Is based on a harvest rate approach and on the BOF Policy on King and Tanner crab management.

2. Expands the harvest of parasitized king crab to reds as well as blues.

3. Provides for a maximum pot limit of 20 pots per vessel if the appropriate GHL is between 300,000 and 400,000 lbs.

4. Specifies that area closures will be utilized to avoid localized depletion or to reduce unnecessary handling mortality.

ADOPTED REGULATORY LANGUAGE
PROPOSAL 278

5 AAC 34.112 is amended to read:

PROPOSAL 278B

5AAC 34.112. HARVEST OF PARASITIZED [BLUE] KING CRAB. Notwithstanding the provisions of 5AAC 34.060 and 5AAC 34.065 all [BLUE] king crab, male, female and sub-legal, that have the barnacle parasite *Briarosaccus callosus* or a scar of the parasite under the flap, may be taken for commercial sale during open commercial fishing seasons. The external reproductive organ of the parasite must be removed from all [FEMALE AND SUB-LEGAL] crab before the crab is placed in a live tank and must be retained on board the vessel, out of contact with sea water, and transferred to a processor for disposal. (Eff. 9/19/90, Register 115; am __/__/93, Register).

Authority: AS 16.05.251

5 AAC 34 is amended by adding a new section to read:

PROPOSAL 278B

5AAC 34.113. SOUTHEAST ALASKA RED KING CRAB MANAGEMENT PLAN.

(a) The Southeast Alaska red king crab fishery shall be managed consistent with the board's "Policy on King and Tanner Crab Resource Management" and according to the principles set forth in this section.

(b) Areas will be closed if the abundance of various sizes of male and female crabs is inadequate to provide for sustained harvests, or when potentially high effort precludes an orderly fishery.

(c) The fishery will be closed if the estimate of the available harvest is below the minimum threshold of 300,000 pounds of legal male red king crab.

(d) An appropriate harvest rate will be determined prior to the opening of the fishery. The harvest rate is the percentage of the legal males that can be harvested while providing for the long term reproductive viability of red king crab stocks. The harvest rate will be based on estimates of abundance of the various size classes of male and female crabs, and on factors affecting the reproductive viability of the stock.

(e) The guideline harvest level will be determined prior to each fishing season. The guideline harvest level is the sum of estimates of sustainable harvests for each fishing district. If stock assessment data are not available, the guideline harvest level will be based on historical fishery performance, catch, and population information. A lack of adequate information will result in conservative management. (Eff. __/__/93, Register).

Authority: AS 16.06.251

5 AAC 34 is amended by adding a new section to read:

5 AAC 34.114. SOUTHEAST ALASKA BROWN KING CRAB MANAGEMENT PLAN.

(a) The Southeast Alaska brown king crab fishery shall be managed consistent with the board's "Policy on King and Tanner Crab Resource Management" and according to the principles set forth in this section.

(b) To the extent possible, brown king crab will be managed as separate stocks in the defined fishing areas. Areas will be closed if the abundance of various sizes of male crabs is inadequate to provide for sustained harvests, or when potentially high effort precludes an orderly fishery.

(c) Management will be based on historical fishery performance, catch, and population structure information. A lack of adequate information will result in conservative management. (Eff. __/__/93, Register).

Authority: AS 16.05.251

5 AAC 34.115(a) is repealed, (b)(1), (2), (3), and (4) are amended and (5) is added to read:

PROPOSAL 278B

5 AAC 34.115. GUIDELINE HARVEST RANGES FOR AREA A. (a) Repealed __/__/93.

5 AAC 34.125(c) is amended and new subsection (g) is added to read:

5 AAC 34.125. LAWFUL GEAR FOR AREA A.

PROPOSAL 278B

(c) During a king crab season in the following waters, an aggregate of no more than 100 king and tanner crab pots may be operated from a vessel registered to fish for king crab, except that an aggregate of no more than 20 [40] king or tanner crab pots may be operated from a vessel registered to fish for red king crab during the general red king crab season, during periods established by emergency order when [IF] the projected guideline harvest level is 300,000 to 400,000 pounds]:

REGULATORY PROPOSAL 279

5AAC 34.XXX. Southeast Alaska BROWN KING CRAB MANAGEMENT PLAN.

Develop a management plan for brown king crab in Southeast Alaska as follows:

5AAC 34.XXX. Southeast Alaska BROWN KING CRAB MANAGEMENT PLAN.

The following options are provided to obtain input from the public and industry, to the Board of Fisheries concerning a revision of the current management approach for brown king crab in Southeast Alaska.

1. Provide for an opening date and time (12:00 noon) that is consistent with the Tanner crab fishery (Proposal for change in Tanner crab fishery submitted in another proposal).

2. Repeal regulations providing for an exploratory area throughout the year.

3. Adjust the southern boundary of the Chatham Area from Pt. Sullivan to Pt. Ellis.

4. Provide the retention and sale of infected crab, regardless of size and sex.

5. Reduce the area guideline harvest range for the exploratory area.

6. Eliminate storage of pots in the water prior to the season opening date.

7. Provide for completion and submission of mandatory logbook information.

8. Provide for a registration deadline.

9. Provide for registration by fishing area.

PROBLEM. Based on recent fishing activities, the brown king crab fishery is experiencing a reduction in the abundance of legal male crab. Stocks contributing to this fishery have not been identified or surveyed. Dockside sampling information for the Frederick Sound Area indicates that the last period of significant recruitment entered the fishery during the 1984 through 1986 period. Management to the established upper guideline harvest level in major fishing areas appears to have been too exploitative to be consistent with the Policy on King and Tanner Crab Resource. Regulation changes need to be considered to provide for more conservative management and for consistence with the existing policy and

accepted management practices. One, all, or various combinations of management options listed above could be utilized to address management problems associated with this fishery. Some of these options have been suggested by industry; some proposed options may be allocative to fishermen with different vessel sizes.

WHAT WILL HAPPEN IF NOTHING IS DONE? Either the commercial fishery will have to be closed until stocks have fully recovered through recruitment (and no mechanism to assess recovery has been established) or regulatory changes need to be implemented to ensure that the brown king crab fishery in each fishing area will be managed in a more conservative manner.

WHO IS LIKELY TO BENEFIT? These potential solutions were developed to provide more rational management for the commercial brown king crab fishery. Obviously, better management will benefit the commercial brown king crab fisherman who desires to have a stable and more long-term interest in this fishery.

WHO IS LIKELY TO SUFFER? Some commercial fishermen may be inconvenienced by the time lines associated with registration, and the prohibition to gear storage on the grounds prior to the season opening.

OTHER SOLUTIONS CONSIDERED? Status quo, but without a significant investment in research projects, the current system may continue to provide inadequate management. Also considered moving the southern boundary down to t aline from Cape Decision to Cape Ommaney, or another more complicated line to limit the exploratory fishery in Chatham Straits to Chatham Straits itself.

PROPOSED BY: Alaska Department of Fish and Game (HQ-92-F-253)

1992/93 BOARD OF FISHERIES BRIEFING DOCUMENT

Title:	5 AAC 34.XXX. Southeast Alaska BROWN KING CRAB MANAGEMENT PLAN
Proposal No.	279
Page	196
Proposed by:	Alaska Department of Fish and Game
Commercial Fisheries Division Author:	Timothy Koeneman, Regional Shellfish Biologist

SYNOPSIS

This document summarizes the Alaska Department of Fish and Game's proposed management plan for the commercial brown king crab fishery in Statistical Area A (Southeast Alaska). This plan is based on the Alaska Board of Fisheries' (BOF) "Policy on King and Tanner Crab Resource Management". The proposed plan describes management measures, rationale, and regulations that are necessary to implement management consistent with the BOF policy. Significant management measures that are in addition to present regulations are: describe geographic boundaries for two new fishing areas, set guideline harvest ranges (GHR) based on historic harvest data, repeal the year-around fishing season for the Exploratory Area, and allow the harvest of parasitized crab. Conservative management is necessary during this period of declining recruitment and abundances of brown king crab. Exploratory fisheries have been conducted for a number of years. While some range extension has been identified, the exploratory fishery has not been successful in identifying any additional large concentrations of brown king crab.

BACKGROUND

Brown king crab are harvested from the relatively unprotected straits and sounds of the northern portion of Southeast Alaska at depths generally between 100 and 350 fathoms. The major fishing grounds are located in fishing Districts 9 through 15 (Figure 1). Fishing conditions encountered by the brown king crab fleet are generally more demanding than the red king crab or Tanner crab fisheries because of the difficulties associated with fishing in areas exposed to adverse weather conditions, greater depths, strong tidal exchanges, and heavy currents. Vessels participating in this fishery are primarily salmon tenders, large seine vessels and larger gillnet vessels. Fishing gear is generally limited to heavier, side-loading king crab pots (7' x 7' x 30"), and heavy top-loading pyramid or conical style stacking king crab gear. Current regulations provide for 100 pots per vessel. Fleet size has been limited by the Alaska Commercial Fisheries Entry Commission. According to the most recent CFEC figures, 73 permits are eligible to participate in the Southeast Alaska brown king crab fishery.

Although commercial fishing for king crab began in 1960, the fishery was not fully developed until the early 1980's. Reliable information on the harvest and distribution of brown king crab was not available until 1976 when brown king crab harvests were first separated from red king crab on fish tickets. The brown king crab fishery is based on the harvest of male crab over 7 inches (178 mm) in carapace width. Although detailed life history studies have not been conducted, available information suggests that there are no specific periods when the majority of the stock undergoes molting or mating, or when egg-hatching

occurs. As a result, seasonal closures to protect sensitive life history periods have not been promulgated. The brown king crab season currently opens with the Tanner crab season on February 15.

Preseason surveys are not available to assist in management of the brown king crab fishery. Instead, management actions are based primarily on fishery performance data from fish tickets, port sampling of landings, and skipper interviews.

Recruitment of brown king crab in Southeast Alaska is sporadic and relatively infrequent. The last time significant recruitment entered the fishery was prior to the 1987/88 season. Since that time, recruitment rates, harvests, and fishing success have declined dramatically in nearly all major fishing areas (Figure 2). During the 1991/92 season, the fishery was closed after only 200,000 lbs of crab had been harvested. Total harvest during the 1992/93 season will be less than 150,000 lbs. This is well below the overall guideline harvest range (GHR) for all areas combined of 550,000 to 1,200,000 lbs. The department believes that the decline in abundance and recruitment is due to harvest levels that are not sustainable and that more conservative management is warranted in future years.

MANAGEMENT ISSUES

The department's primary objective for the brown king crab fishery is to provide for proper stock management that is consistent with BOF policies and accepted management measures. Placing the key elements of the management plan for this fishery in regulation will clearly identify the basis of management to the public and industry. Additionally, 5AAC 34.080. HARVEST STRATEGY, specifies that the BOF must review any changes the department may propose to existing harvest strategies for king crab.

The original proposal submitted to the BOF by the department contained several options for managing the brown king crab fishery. By presenting these management options, the department hoped to solicit input from the public, fishing fleet, processors, and the BOF concerning a revised management approach for this fishery. Several of the options listed in the original proposal are not recommended by the department for adoption. Each management option in the original proposal and the department's recommendation, is discussed below:

1. Provide for a 12:00 noon opening date.

The current season opening date does not specify a starting time. Technically, vessels may start fishing just after midnight. The Tanner and brown king crab fisheries should be opened at the same time to avoid confusion and to provide for a fair start. The adoption of this change is supported by the department.

2. Repeal regulations providing for an exploratory fishery that extends throughout the year.

The Exploratory Area has been open, by regulation, since 1987. The purpose of the Exploratory area was to allow the fleet to identify areas outside of the traditional fishing areas where commercially viable populations of brown king crab might exist. Although some additional areas have been identified, harvests have been relatively low in nearly all of the exploratory area currently defined in regulation. The department feels that the "year-around" exploratory fishery should be discontinued. The additional fishing areas that have been identified via the exploratory fishery and appropriate guideline harvest ranges should be described in regulations and should be managed on a consistent basis with the other brown king crab fishing areas.

3. Adjust the southern boundary of the Chatham Area from Point Sullivan to Point Ellis.

The boundary at Point Sullivan in District 12 (Figure 3) bisects two subdistricts. This makes the assignment of harvests to the proper fishing area extremely difficult. The proposed area boundary adjustment would allow for more accurate and consistent harvest reporting through the fish ticket system. This change also allows the dockside sampling data to be allocated to the correct fishing area. The department recommends adoption of this regulatory change to improve catch reporting accuracy.

4. Provide for the retention and sale of infected crab, regardless of size and sex.

Crab infected with the parasite *Briarosaccus callosus* are not reproductively viable and experience reduced growth. By remaining on the grounds infected crab serve as hosts for additional proliferation of the disease. Removal of parasitized crab from the general population may increase stock abundance and growth and the department recommends inclusion of this provision in the management plan.

5. Reduce the area guideline harvest ranges, and establish a separate guideline harvest range for the exploratory area.

The department believes that the current GHRs for the Frederick Sound (200,000 to 600,000 lbs), Icy Straits (150,000 to 250,000 lbs), and Chatham Straits (200,000 to 350,000 lbs) areas are significantly higher than can be supported on a sustained yield basis. Given that recruitment of brown king crab is extremely variable, more conservative GHR's should be established to provide for more stability in the fishery and to ensure that the reproductive potential of the stocks are maintained as per existing BOF policy. Recommended upper limits of the GHRs for each fishing area are based upon historic harvest information (Table 1), rounded to the nearest 50,000 lbs.

In addition, the current exploratory area (Figure 4) should be repealed and replaced with two additional areas that have been identified as capable of supporting consistent harvests of brown king crab. These two new areas are the Cape Ommaney area in Districts 9 and 13 (Figure 5) and the Clarence Strait area in Districts 1, 2, 6, and 7 (Figure 6). Guideline harvest ranges should be established for these areas and they should be managed consistently with the traditional fishing areas in Frederick Sound, Chatham Straits, and Icy Straits.

6. Eliminate storage of pots in the water prior to the season opening date.

Elimination of preseason pot storage could reduce or eliminate some enforcement and fair-start problems. However, smaller vessels that choose to fish larger, heavier pots would then be at a disadvantage. Due to the allocative implications, the department maintains a neutral position regarding this management measure.

7. Provide for completion and submission of mandatory logbook information.

Mandatory logbooks could provide additional information to complement existing fishery performance and port sampling data collection programs. However, because the department does not have sufficient staff to support and administer a mandatory logbook program at this time, this provision is not recommended for adoption.

8 and 9. Provide for a registration deadline and provide for registration by fishing district.

Registration deadlines and district registration would provide a method for controlling fishing effort by area. Administering this registration system would be very complicated and must consider stock assessment information, provisions for re-registration, and other factors. As a result, the department does not recommend adoption of these measures at this time.

ENFORCEMENT ISSUES

There should be no significant increase in enforcement activities as a result of adoption of the recommended portions of this proposal as regulation.

FISCAL NOTE

There should be no significant increase in fiscal costs for field programs or projects costs as a result of adoption of the recommended portions of this proposal as regulation.

CONCLUSIONS AND RECOMMENDATIONS

Brown king crab stock conditions are poor in the traditional fishing areas due to excessive harvests and the lack of recruitment. Prosecution of fisheries in future years will not be successful unless a more conservative management strategy is implemented. Adoption of regulations implementing a prescribed management plan will assist the department in managing in a manner which is consistent with the current BOF policy. In addition, adoption of the brown king crab management plan will provide industry and the public with increased knowledge of the mechanisms and rationale for management actions. The department recommends that the management plan and the associated regulatory language be adopted to include the following:

1. Provide for a management plan that includes GHR's by defined fishing area that area based on historic harvests, fishery performance, and population structure.

2. Reduce the existing GHR's for the Chatham Strait, Icy Straits, and Frederick Sound areas.

3. Repeal the current exploratory fishery and establish two new areas with associated GHR's.

4. Allow the harvest and sale of brown king crab infected with the parasite *Briarosaccus callosus* regardless of sex or size.

5. Adjust the southern boundary of the Chatham Area from Point Sullivan to Point Ellis to improve fishery catch reporting.

6. Provide for a season start time of 12:00 noon for consistency with the Tanner crab fishery.

REGULATORY LANGUAGE

The following regulatory language is suggested to implement the proposed management plan:

5 AAC 34.107. DESCRIPTION OF BROWN KING CRAB FISHING AREAS WITHIN STATISTICAL AREA A.

(c) Chatham Straits area: all waters of District 9 north of the latitude of Point [Sullivan] Ellis and west of a line from Kingsmill Point to Point Gardner.

(d) [Exploratory] Cape Ommaney area: [all remaining waters of Statistical Area A] all waters of district 9 south of the latitude of Point Ellis, and that portion of District 13-B south of the latitude of Redfish Cape, located at 134°52'20" W. long. and 56°18'40" N. lat.

(e) Clarence Straits area: all waters of districts 1 and 2, all waters of district 6 south of a line from Point Colpoys to Macnamara Point, and all waters of district 7 south of the latitude of Point Eaton.

5 AAC 34.115. GUIDELINE HARVEST RANGES FOR AREA A. (b) in Area A the guideline harvest ranges for the taking of brown king crab are:

(1) in the Frederick Sound area, from [200,000] 0 to [600,000] 350,000 lbs.

(2) in the Icy Straits area, from [150,000] 0 to 250,000 lbs.

(3) in the Chatham Straits area, from [200,000] 0 to [350,000] 150,000 lbs.

(4) in the [Exploratory] Cape Ommaney area, [there is no fixed guideline harvest range] from 0 to 50,000 lbs.

(5) in the Clarence Straits area, from 0 to 25,000 lbs.

5 AAC 34.110. FISHING SEASONS FOR AREA A. (b) Male brown king crab may be taken

(1) [in the Frederick Sound, Icy Straits, and Chatham Straits brown king crab fishing areas, as described in 5 AAC 34.107 (a)-(c),] only from 12:00 noon February 15 until the season is closed by emergency order;

(2) (A) and (B) Repealed effective.

5 AAC 34.112. HARVEST OF PARASITIZED [BLUE] KING CRAB. Notwithstanding the provisions of 5AAC 34.060 and 5AAC 34.065 all [blue] king crab, male, female and sub-legal, that have the barnacle parasite *Briarosaccus callosus* or a scar of the parasite under the flap, may be taken for commercial sale during open commercial fishing seasons. The external reproductive organ of the parasite must be removed from all [female and sub-legal] crab before the crab is placed in a live tank and must be retained on board the vessel, out of contact with sea water, and transferred to a processor for disposal.

5 AAC 34.XXX. Southeast Alaska BROWN KING CRAB MANAGEMENT PLAN NEW SECTION.

(a) The Southeast Alaska brown king crab fishery shall be managed consistent with the Alaska Board of Fisheries "Policy on King and Tanner Crab Resource Management" and according to the principles set forth in this section.

(b) To the extent possible, brown king crab will be managed as separate stocks in the defined fishing areas. Areas will be closed if the abundance of various sizes of male crabs is inadequate to provide for sustained harvests, or when potentially high effort precludes an orderly fishery.

(c) Management will be based on historical fishery performance, catch, and population structure information. A lack of adequate information will result in conservative management.

Table 1. Proposal 279. Summary of brown king crab fish ticket data used to determine upper limit of guideline harvest levels for traditional and exploratory fishing areas.

Reported Catch (in Pounds)

Season	Fredrick Sound	Icy Strait	Lower Chatham	Exploratory Areas	
1976/77	76,182	1,290			
1977/78	86,874	1,593			
1978/79	40,914	6,514			
1979/80	80,983	71,423			
1980/81	211,357	471,905			
1981/82	293,774	306,604	41,319		
1982/83	247,499	418,637	89,826		
1983/84	271,081	562,797	77,688		
1984/85	427,454	222,692	86,064		
1985/86	418,619	82,018	99,987		
1986/87	424,435	45,228	302,156		
1987/88	397,758	285,487	166,131	69,876	
1988/89	484,127	260,781	279,336	55,850	
1989/90	176,541	187,052	185,118	38,482	
1990/91	156,758	96,286	102,160	52,645	
1991/92	58,480	48,799	23,361	*	
Historical Average	240,802	191,819	132,104	54,213	
Average from 1982/83 to 1986/87 season	357,818	266,274	131,144		
Recommended GHR				Cape Ommaney	Clarence Strait
Lower Limit	0	0	0	0	0
Upper Limit	350,000	250,000	150,000	50,000	25,000

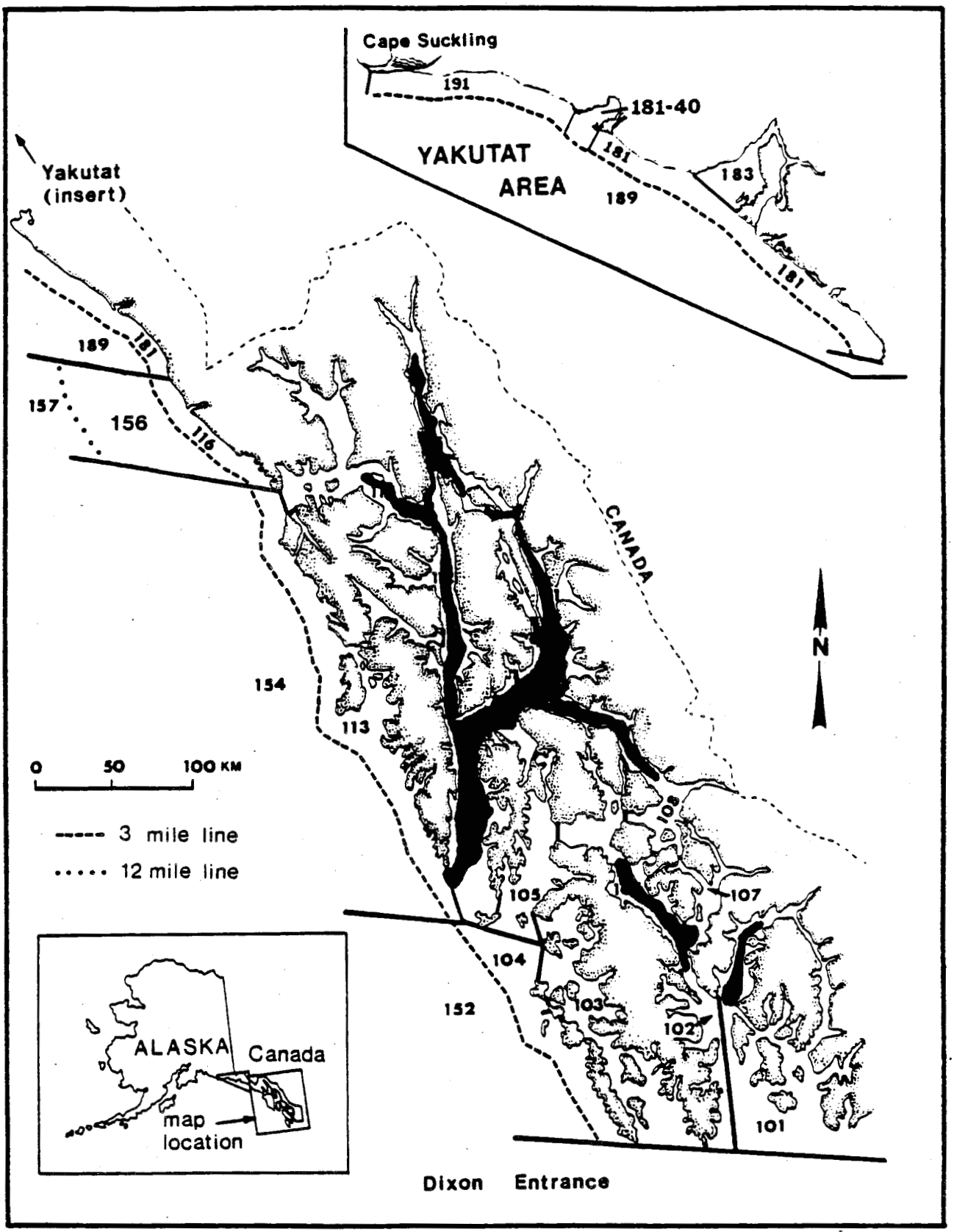


Figure 1. Major fishing grounds for brown king crab in Region I.

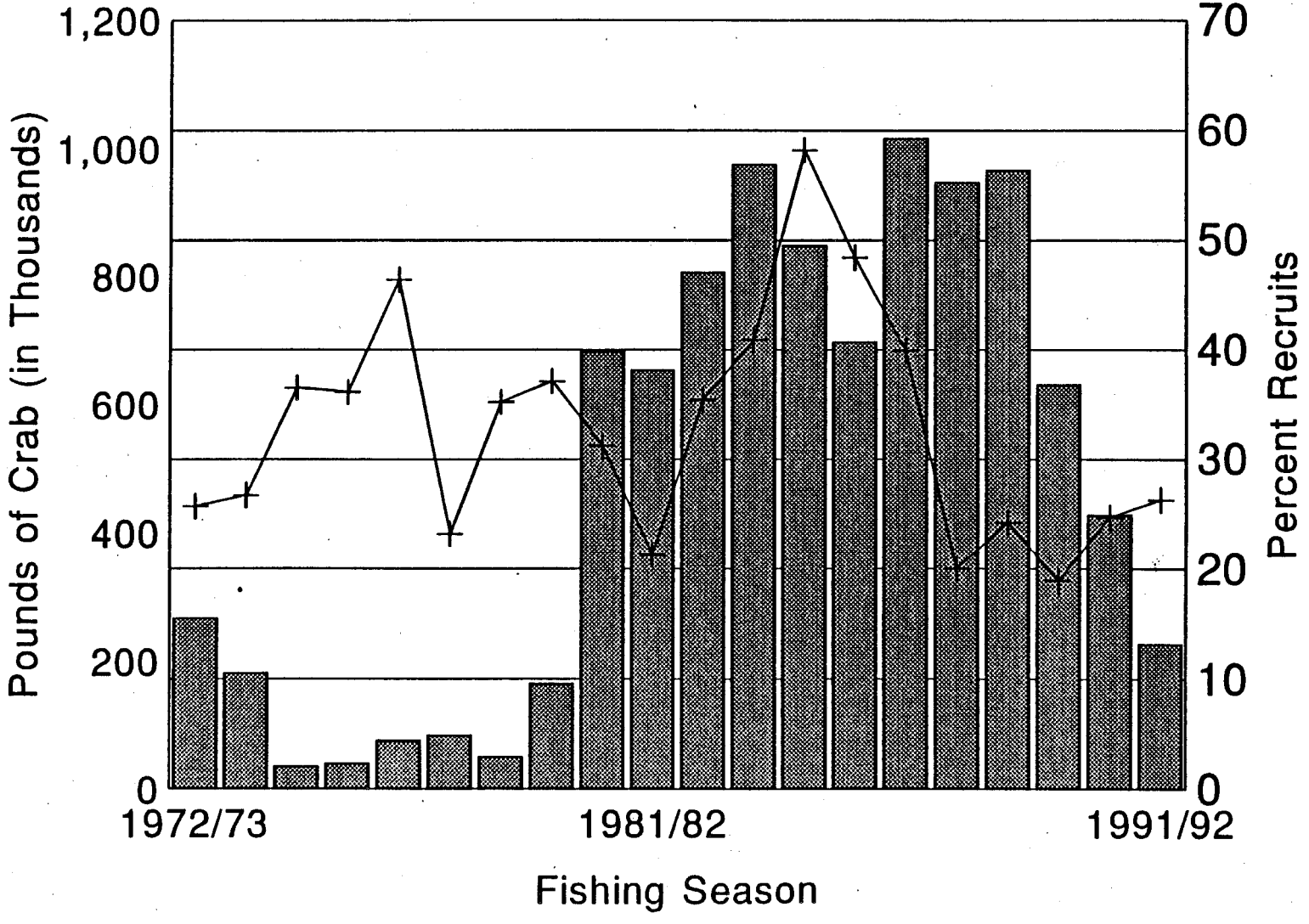


Figure 2. Harvest and recruitment of brown king crab in Southeast Alaska from the 1972/73 season through the 1991/92 season.

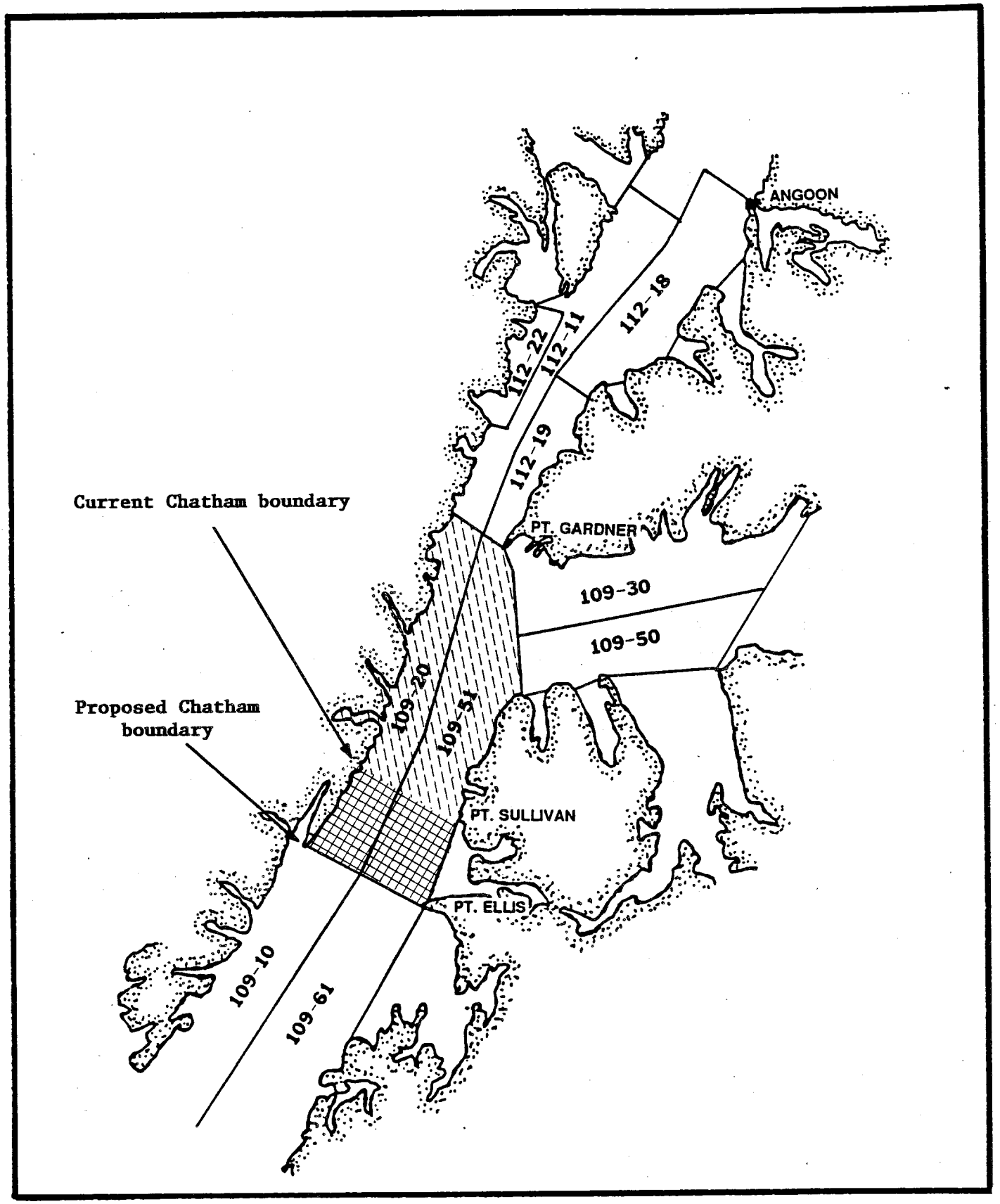


Figure 3. Proposal 279. Adjust the southern boundary of the Chatham area from Point Sullivan to Point Ellis.

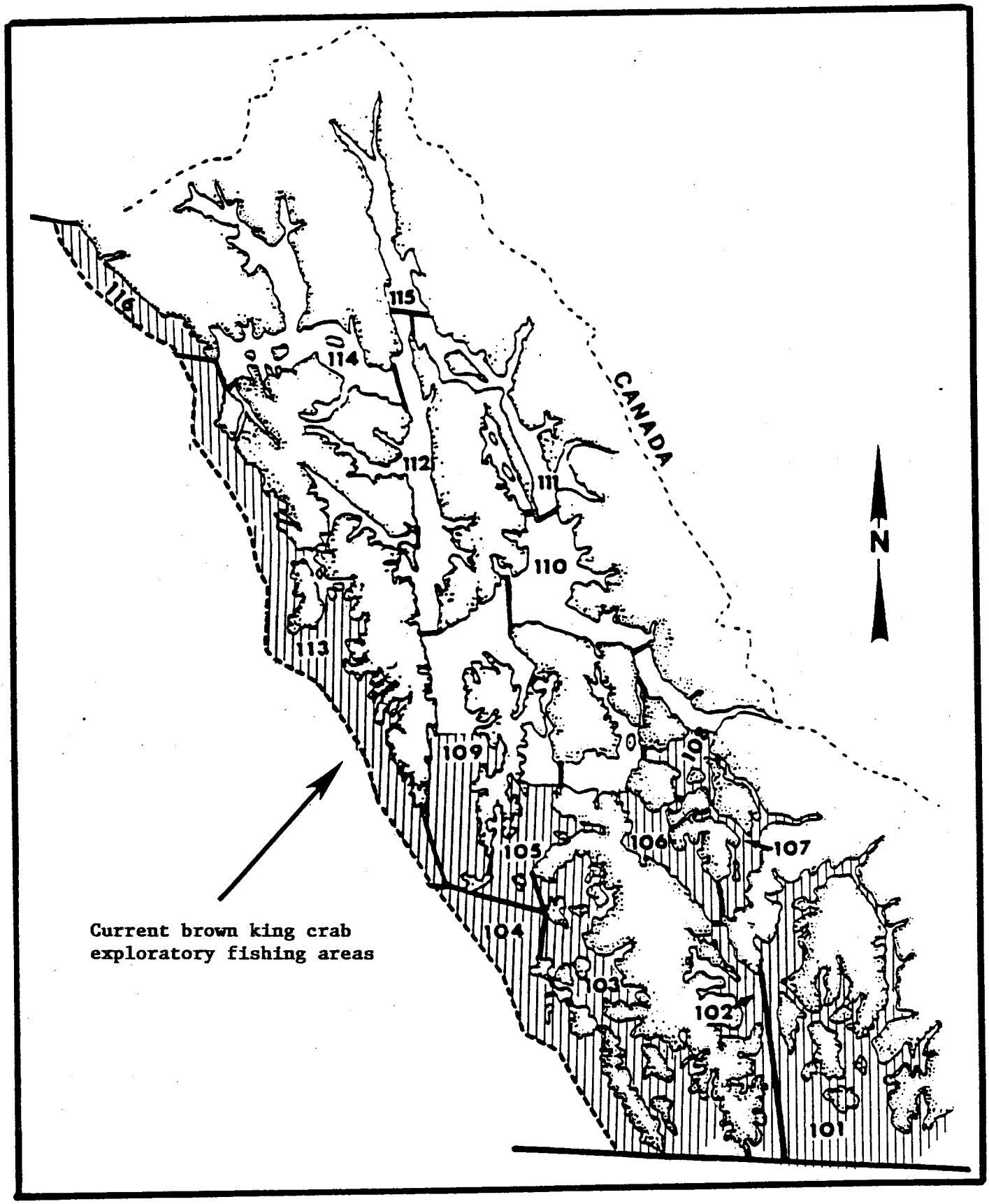


Figure 4. Proposal 279. Repeal current exploratory brown king crab fishing areas.

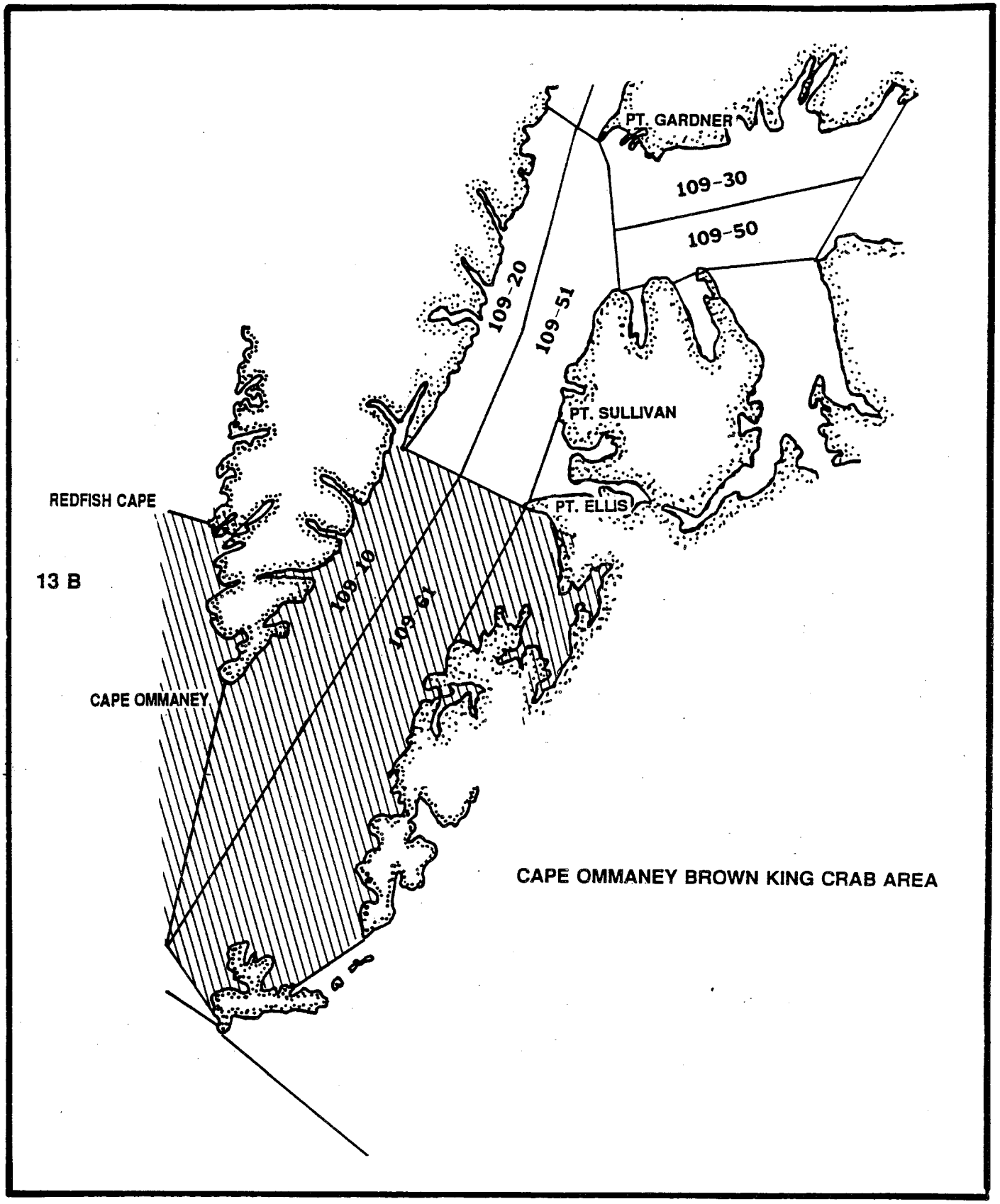


Figure 5. Proposal 279. Description of proposed Cape Ommaney brown king crab fishing area.

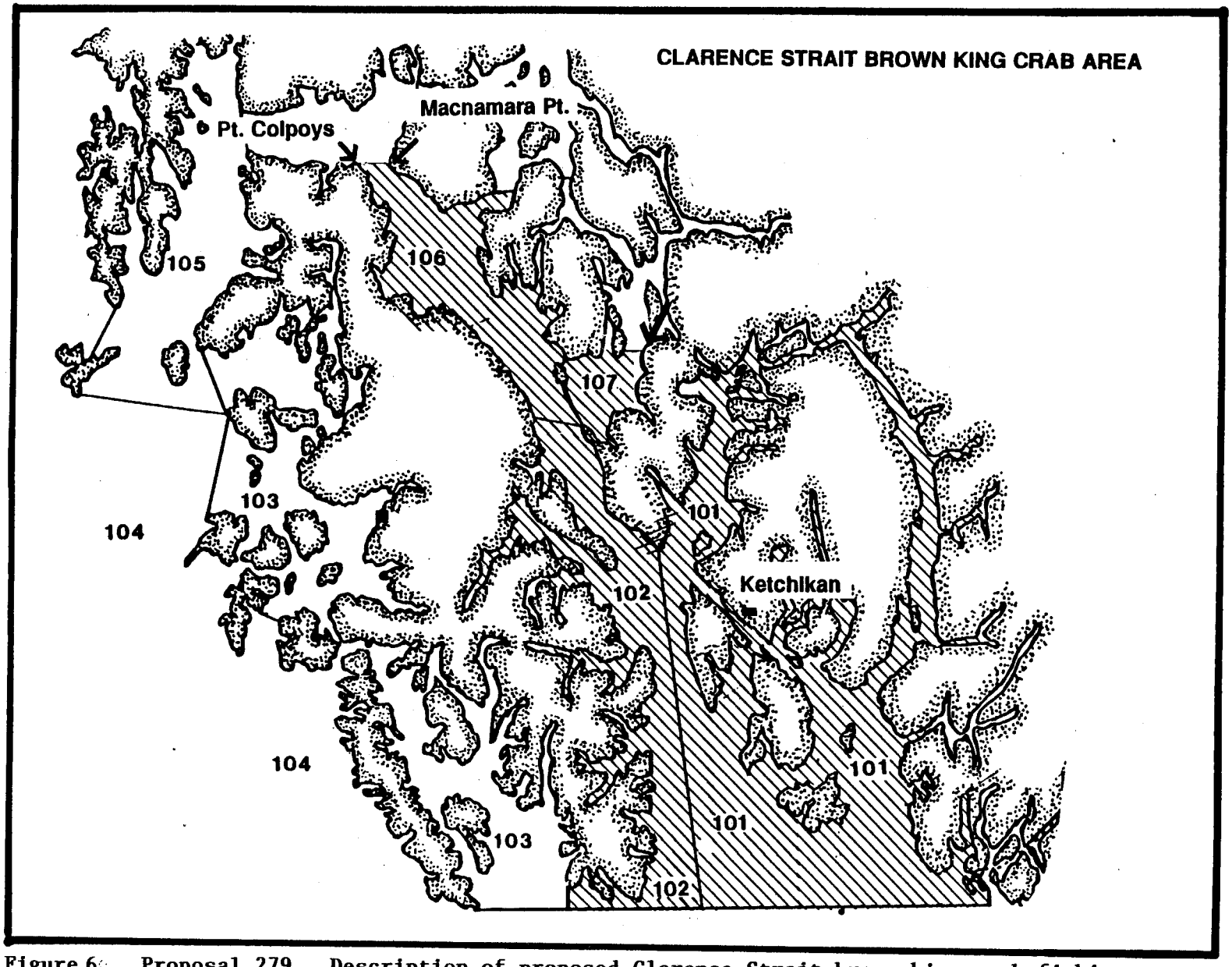


Figure 6. Proposal 279. Description of proposed Clarence Strait brown king crab fishing area.

BOARD OF FISHERIES ACTION
PROPOSAL 279

Action: ADOPTED 6 to 1

As was the case with the red king crab management plan, the list of options in the proposed brown king crab management plan were developed as points of discussion with some of those being staff recommendations. Substitute language was developed by staff and presented to the BOF at the beginning of the meeting as a result of discussion with fleet members regarding the boundary change recommendation. This option that was suggested by the fleet provided for a reduction in size from 7 inches to 6 1/2 inches in the Cape Ommaney and Clarence Strait areas and in increase in the GHL cap from 50,000 lbs to 100,000 lbs in the Cape Ommaney area. Board deliberation revolved around this combination of opportunity. The one member in opposition stated that it was more responsible for the department to be gathering biological information with the 7 inch minimum size and 50,000 lb cap until they can analyze the data. If the data supported the fact that crab in the area actually matured at a smaller size, and did not reach the same maximum size as in other fishing areas, the BOF could then react and adjust the size and quota. As it stands, the data collected so far is very minimal though it infers that this is the case. This member stated that king crab management in general has had mixed success and he favors more conservative management as a result.

The final brown king crab management plan includes these changes to existing regulatory language:

1. Repeal of the current year-round exploratory fishery and creation of two additional fishing areas; the Cape Ommaney and Clarence Strait areas with respective GHR's (Cape Ommaney = 0 to 100,000 lbs. and Clarence Strait = 0 to 25,000 lbs.)

2. The boundary of the current Lower Chatham area was changed from the latitude of Point Sullivan to Point Ellis to improve the accuracy of catch data.

3. The existing GHR's for each of the three traditional fishing areas were lowered. Frederick Sound was lowered from 200,000 - 600,000 lbs. to 0 - 350,000 lbs.; Icy Strait was modified from 150,000 - 250,000 to 0 - 150,000 lbs.; and Chatham Strait was lowered from 200,000 - 350,000 lbs. to 0 - 150,000 lbs.

4. Provisions for the harvest of parasitized brown king crab, regardless of size and sex.

5. Provisions for change by EO to a minimum size limit of 6.5 inches in Cape Ommaney and Clarence Strait areas when all other fishing areas are closed. This change was requested by one of the crab fisherman in attendance at the meeting. His feeling was that the only way to effectively fish in the new Cape Ommaney area was to lower the size limit and increase the GHR since a greater portion of the stock becomes susceptible to the fishery. Staff supported this change because we also believed that the crab were significantly smaller in this area. Potential enforcement problems were minimized by language specifying that the minimum size limit will be established by emergency order only when the other areas are closed. In addition, because this change is implemented via EO, if we determine that the new size limit is not appropriate we will not implement the change.

ADOPTED REGULATORY LANGUAGE
PROPOSAL 279

5 AAC 34.107(c) and (d) are amended and (e) is added to read:

PROPOSAL 279A

5 AAC 34.107. DESCRIPTION OF BROWN KING CRAB FISHING AREAS WITHIN STATISTICAL AREA A.

(c) Chatham Straits Area: all waters of District 9 north of the latitude of Point Ellis [SULLIVAN] and west of a line from Kingsmill Point to Point Gardner.
(d) Cape Ommaney Area [EXPLORATORY]: all waters of district 9 south of the latitude of Point Ellis, and that portion of District 13-B south of the latitude of Redfish Cape, located at 134° 52' 20" W. long. and 56° 18' 40" N. lat.[ALL REMAINING WATERS OF STATISTICAL AREA A]
(e) Clarence Straits Area: all waters of District 1 and District 2, all waters of District 6 south of a line from Point Colpoys to Macnamara Point, and all waters of District 7 south of the latitude of Point Eaton. (Eff. 7/23/88, Register 107; am 9/19/90, Register 115; am __/__/93, Register).

Authority: AS 16.05.251

5 AAC 34.110(b)(1) is amended and (b)(2) is repealed to read:

PROPOSAL 279A

5 AAC 34.110. FISHING SEASONS FOR AREA A.

(b) (1) [IN THE FREDERICK SOUND, ICY STRAITS, AND CHATHAM STRAITS BROWN KING CRAB FISHING AREAS, AS DESCRIBED IN 5 AAC 34.107 (A)-(C),] only from 12:00 noon February 15 until the season is closed by emergency order;
(2) Repealed __/__/93

(In effect before 1981; am 6/28/81, Register 78; am 7/25/82, Register 83; am 6/30/83; Register 86; lam 6/30/84, Register 90; am 7/14/85, Register 95; am 7/12/86, Register 99; am 12/14/86, Register 100; am 7/23/88; Register 107; am 9/19/90, Register 115; am __/__/93, Register)

Authority: AS 16.05.060
AS 16.05.251

PROPOSAL 279A

(b) (1) in the Frederick Sound Area, from 0 [200,000] to 350,000 [600,000] pounds.
(2) in the Icy Straits Area, from 0 [150,000] to 250,000 pounds.
(3) in the Chatham Straits Area, from 0 [200,000] to 150,000 [350,000] pounds.
(4) in the Cape Ommaney [EXPLORATORY] Area, from 0 to 100,000 pounds [THERE IS NO FIXED GUIDELINE HARVEST RANGE].
(5) in the Clarence Straits Area, from 0 to 25,000 pounds. (In effect before 1981; am 6/28/81, Register 78; am 6/30/83, Register 86; am 7/14/85, Register 95; am 12/14/86, Register 100; am 7/23/88, Register 107; am __/__/93, Register)

Authority: 16.05.251

5 AAC 34.120 is amended by adding new paragraph (4) to read:

5 AAC 34.120. SIZE LIMITS FOR AREA A

(4) Male brown king crab six and one-half inches (165 mm) or greater in width of shell may be taken or possessed in the Cape Ommaney and Clarence Strait Areas during periods opened and closed by emergency order. (In effect before 1981; am 6/28/81, Register 78; am 12/14/86, Register 100; am __/__/93, Register).

Authority: AS 16.05.251

REGULATORY PROPOSAL 280

5aac 34.150. AREA A CLOSED.

Section 11-A closed to commercial taking of king crab.

PROBLEM: Close Section 11-A to commercial harvesting of king crab. Crab habitat within this section is limited and extensive commercial harvesting of small areas severely limits the availability of legal size crabs for personal use.

WHAT WILL HAPPEN IF NOTHING IS DONE? Juneau area residents will find local areas blanketed by commercial gear, and be unable to find legal crabs.

WHO IS LIKELY TO BENEFIT? Many personal use fishermen in the Juneau area who use seafood to supplement their diets.

WHO IS LIKELY TO SUFFER? A few commercial crabbers will have to travel farther from Juneau to harvest crabs.

OTHER SOLUTIONS CONSIDERED? We considered recommending closure of localized areas (e.g., Eagle River Beach) to commercial harvest, but decided these small closures would unduly complicate regulations.

PROPOSED BY: Territorial Sportsmen, Inc. (HQ-92-F-170)

1992/93 BOARD OF FISHERIES BRIEFING DOCUMENT

Title: Closure of Section 11-A to the commercial harvest of king crab.

Proposal No. 280

Page 197

Proposed by: Territorial Sportsmen

Commercial Fisheries Division Author: Doug Mecum, Regional Management Biologist
Kenneth Imamura, Assistant Shellfish Biologist

SYNOPSIS

If adopted, this proposal would close Section 11-A to the commercial harvest of king crab. A companion proposal, number 277, requests the same closure for Tanner crabs. The department maintains a neutral position on this allocative proposal.

BACKGROUND

This proposal cites a limited availability of crabs for personal use as the reason for the requested closure. Although the wording of this proposal is not limited to red king crab, it is assumed that this is the intended species of record, since neither blue nor brown king crabs occur in significant abundance near Juneau.

Commercial Fishery

By regulation, the commercial fishery for red king crab opens on November 1. The commercial fishery for red king crabs in Southeast Alaska has been closed since 1984 because of low abundance of crabs overall in Southeast Alaska. Prior to 1984, the total harvest ranged from about 200,000 to over 600,000 lbs. The Board has established that a minimum threshold of 300,000 lbs of legal male red king crab must be available for harvest before a commercial fishery is allowed.

A portion of Section 11-A in Gastineau Channel and Auke Bay (Figure 1) are closed by regulation to commercial fishing for red king crab. These areas were closed by the Board of Fisheries to enhance personal use fishing opportunities for Juneau area residents. During the period from 1975 through 1984, the commercial harvest from all of Section 11-A averaged about 41,000 lbs of red king crab. Section 11-A contributed an average of around 10% (range = 3.6% to 21.1%) of the total Southeast commercial harvest of red king crab.

Non-Commercial Fishery

Current regulations prohibit the harvest of king crab by non-residents. Under personal use regulations, residents (with a valid sport fishing license) may harvest and have in possession, up to six male red,

brown, or blue king crab, in combined aggregate. Red and brown king crab must be a minimum of seven inches in carapace width and blue king crab must be a minimum of 6.5 inches in carapace width (including spines). No more than five pots per person or 10 pots per vessel may be used to take personal use shellfish at any time.

Commercial fishermen may retain any portion of their lawfully taken commercial catch of shellfish for their personal use. This is one instance where a non-resident may lawfully possess king crab. There is no limit to the number or amount of shellfish that may be retained for personal use under this provision in the commercial fishing regulations.

Depending on residency, commercial fishermen may also fish under sport or personal use regulations during periods closed to commercial harvest. However, they may not fish under any of these regulations for 14 days prior to a commercial fishery for that species.

The Board has determined that there is no customary and traditional use of king and Tanner crab in Southeast Alaska [5AAC 02.107 (a) through (l)]. As a result, there is no provision for subsistence harvest of these species.

Limited information exists on the non-commercial harvest of king crab in Southeast Alaska. Harvest data is available from a survey of 30 communities throughout Southeast Alaska that was conducted in 1987 by the Division of Subsistence. This survey estimated a total non-commercial harvest in Southeast Alaska (excluding Juneau and Ketchikan) of approximately 63,400 lbs of king crab (all species combined).

The Division of Sport Fisheries has obtained estimates of the personal use harvest of king and Tanner crab in the Juneau area for the period from 1988 through 1992. For Juneau, the harvest of king crab has increased from about 550 crab (roughly 4,000 lbs) in 1988 to 5,700 crab (41,000 lbs) in 1992 (Table 2). It should be noted that these are minimal estimates since surveys are only conducted from April through September. No estimates are available for the personal use harvest of king crab by divers during the October through March period.

MANAGEMENT ISSUES

Overall Southeast Alaska red king crab abundance is currently considered to be too low for commercial harvest. However, local stocks in the wider Juneau area from Seymour Canal, Section 11-A, lower Lynn Canal, Eagle River, and Saint James Bay, are near levels that once supported a commercial fishery.

The recovery in abundance of local stocks of red king crabs in the Juneau area has been offset to some extent by the expanding personal use fisheries for this species. In the Juneau area, non-commercial harvests of red king crab are close to or above the historical harvests that occurred in the commercial fishery. It is possible that the current levels of personal use harvest of red king crab are approaching the long-term sustainable yield for stocks in the Juneau area. A case in point is Barlow Cove in Section 11-A, where recent department surveys of red king crab abundance have indicated a disproportionate number of smaller, sublegal males and unexpectedly low numbers of nearly-legal and legal males.

During years when the commercial red king crab fishery was opened, an average of around 10 vessels reported catches from Section 11-A. Closure of the commercial king crab fishery would force some fishing vessels to move to other open areas resulting in increased competition and effort.

A closure of all of Section 11-A to the commercial harvest of king crab might increase the availability of crab to the personal use fishery. For example, the increased harvests of red king crab by personal use fishermen in the Juneau area over the last several years are likely due, in part, to increasing abundance of red king crab resulting from the closure of the commercial fishery for the past eight years.

ENFORCEMENT ISSUES

If this proposal is adopted, the department recommends that Section 11-A be closed to the harvest of all king crab (red, blue, and brown). If blue and brown king crab fisheries remained open in Section 11-A, it would be difficult to enforce the prohibition on retention of red king crab. Harvests of brown king crab in Section 11-A have averaged around 4,200 lbs (Table 4). Blue king crab harvests in this area are generally less than 500 lbs.

FISCAL NOTE

Adoption of this proposal by the Board should not result in any significant increases in expenditures by the department.

CONCLUSIONS AND RECOMMENDATIONS

* This is an allocative proposal and the department maintains a neutral position.

* If this proposal is adopted, the department recommends that the closure apply to all species of king crab to alleviate enforcement concerns.

REGULATORY LANGUAGE

Should this proposal be adopted, the following regulatory language is suggested:

5AAC 34.150. AREA A CLOSED WATERS. In Area A, [that portion of Section 11-A north of a line from Marmion Island Light to the easternmost tip of Point Salisbury and east of a line extending from the northernmost tip of Outer Point to the southernmost tip of Portland Island to the northernmost tip of Portland Island to the southernmost tip of Point Louisa are] Section 11-A is closed to the taking of king crab.

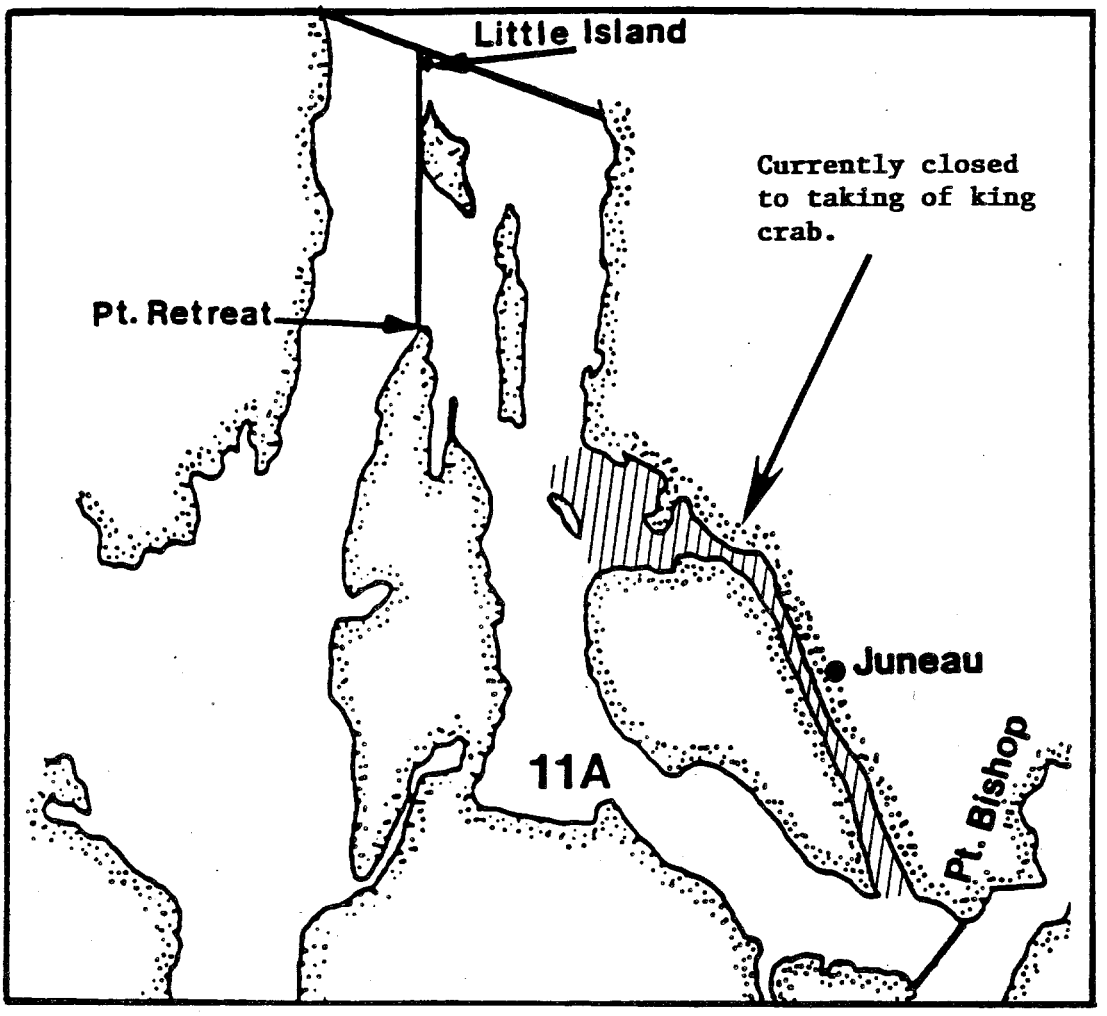


Figure 1. Proposal 280 requests the closure of Section 11-A to commercial harvest of king crab.

Table 1. Historical commercial red and blue king crab harvest from Section 11-A[1] and percent contribution to total Southeast harvest.

Season	Permits	Pounds	% of Southeast Harvest
1975/76	*	*	*
1976/77	9	59,621	18.0
1977/78	5	16,911	6.1
1978/79	11	52,562	9.1
1979/80	10	53,254	8.1
1980/81	10	65,379	21.1
1981/82	12	62,359	11.8
1982/83	11	16,405	3.6
1983/84	9	15,059	4.7
1984/85	16	29,026	10.5
1985/86	*	*	*
1986/87	*	*	*
1987/88	5	*	*
1988/89	*	*	*
1989/90	*	*	*
1990/91	*	*	*
1991/92	*	*	*
Averages:		41,205	

[1] Subdistricts include 111-40, 111-41 and 111-50. Harvest totals include very small amounts of blue king crab.
[2] The last commercial red king crab fishery occurred from October 10 through October 17, 1984.

Table 2. Estimated shellfish effort and crab harvest for selected Southeast Alaska marine boat fisheries from 1988-1992.

	1988	1989	1990	1991	1992
Juneau					
Survey Period	4/11-9/25	4/24-9/24	4/23-9/23	4/15-9/29	4/27-9/27
Effort (boat-days)	2,287	2,652	2,622	3,812	5,411
Dungeness crab harvest	6,459	8,356	6,289	13,433	12,675
Tanner crab harvest	3,042	3,369	1,883	1,294	1,035
King crab harvest	552	1,849	1,960	2,467	5,673
Ketchikan					
Survey Period	4/11-9/25	4/24-9/24	5/07-9/23	4/29-9/29	4/27-9/27
Effort (boat-days)	1,398	508	614	1,394	1,387
Dungeness crab harvest	9,043	2,688	3,367	7,631	10,225
Tanner crab harvest	0	100	0	0	22
King crab harvest	0	0	0	0	0
Sitka					
Survey Period	4/11-9/25	4/24-7/02	None	None	None
Effort (boat-days)	635	76			
Dungeness crab harvest	1,642	241			
Tanner crab harvest	10	0			
King crab harvest	26	0			
Petersburg					
Survey Period	4/11-7/17	4/10-7/16	None	None	5/11-7/19
Effort (boat-days)	171	103			282
Dungeness crab harvest	939	501			347
Tanner crab harvest	249	31			778
King crab harvest	0	0			0
Wrangell					
Survey Period	4/11-7/17	4/24-7/16	None	None	5/11-7/19
Effort (boat-days)	107	207			144
Dungeness crab harvest	868	887			773
Tanner crab harvest	60	0			0
King crab harvest	0	0			0
Haines					
Survey Period	4/11-7/10	4/24-6/25	None	None	None
Effort (boat-days)	188	16			
Dungeness crab harvest	257	223			
Tanner crab harvest	254	0			
King crab harvest	0	0			
Craig/Klawock					
Survey Period	None	None	None	None	5/11-7/19
Effort (boat-days)					124
Dungeness crab harvest					694
Tanner crab harvest					0
King crab harvest					0

Table 3. Juneau area sport/personal use shellfish harvests in District 11 for 1991 and 1992.

Year	Species/ Effort	Total Harvest	District 111 Harvest	Percent of Total
1991	King Crab	2,467	2,258	92%
	Tanner Crab	1,294	1,252	97%
	Boat Days	3,812	3,072	81%
1992	King Crab	5,673	5,340	94%
	Tanner Crab	1,035	1,031	99.6%
	Boat Days	5,411	4,194	78%

Table 4. Historical commercial brown king crab harvest from Section 11-A[1] and percent contribution to total Southeast harvest. [Proposal 280]

Season	Permits	Pounds	% of Southeast Harvest
1976/77	*	*	*
1978/79	*	*	*
1979/80	3	2,185	1.3
1980/81	9	18,363	2.7
1981/82	10	5,493	0.8
1982/83	*	*	*
1983/84	4	7,915	0.8
1984/85	7	879	0.0
1985/86	4	8,986	1.3
1986/87	5	5,186	0.9
1987/88	7	8,695	0.1
1988/89	5	1,114	0.0
1989/90	4	212	0.0
1990/91	4	345	0.0
1991/92	4	493	0.0
Averages:		4,158	

[1] Subdistricts include 111-40, 111-41 and 111-50.

BOARD OF FISHERIES ACTION
PROPOSAL 280

Action: FAILED 7 TO 0

The BOF spent very little time discussing this proposal. Members felt that the burden of proof in regard to providing reasons for changing the regulations had not been met. No support had been submitted by letter or had been voiced at the meeting.

REGULATORY PROPOSAL 281

5aac 34.035. CLOSURE OF REGISTRATION AREAS.

No commercial crabbing in Taiya Inlet north of line from Taiya Point on the west end to Lower Point on the east of the line.

PROBLEM: Taiya Inlet is a narrow inlet which can be easily harvested by the commercial crab fleet. Studies have not been done to reveal the effects of the fleet on such a limited area.

WHAT WILL HAPPEN IF NOTHING IS DONE? The decimation of the king crab stocks in Taiya Inlet.

WHO IS LIKELY TO BENEFIT? All non-commercial users of the fishery.

WHO IS LIKE TO SUFFER? The one commercial boat which occasionally fishes in Taiya Inlet.

OTHER SOLUTIONS CONSIDERED?

PROPOSED BY: Stan Selmer (HQ-92-F-87)

1992/93 BOARD OF FISHERIES BRIEFING DOCUMENT

Title:	Closure of Taiya Inlet to commercial harvest of crabs
Proposal No.	281
Page	198
Proposed by:	Stan Selmer
Commercial Fisheries Division Author:	Robert D. Mecum, Regional Management Biologist Kenneth Imamura, Assistant Shellfish Biologist

SYNOPSIS

This proposal requests the closure of Taiya Inlet in District 15 in Lynn Canal to commercial crabbing. The department maintains a neutral position regarding this allocative proposal.

BACKGROUND

Taiya Inlet is in the northern portion of commercial fisheries statistical area 115-34. Subdistrict 115-34 encompasses all waters in Lynn Canal north of Seduction Point, with the exception of Lutak Inlet (Figure 1). It is not possible to determine the commercial catch of king (red, blue, and brown) and Tanner crab attributable solely to Taiya Inlet. Therefore, the data provided in this document includes landings from all of 115-34. Most of the king and Tanner crab harvest data for this area is confidential due to fewer than three boats reporting catches.

The major fishing areas within 115-34 are generally south of Taiya Inlet. These include the Tanner grounds on both sides of the Lynn Canal around the community of Haines and brown king crab grounds in the deeper waters toward the southern end of the statistical area. There may be some fishing for all of these species within Taiya Inlet, but the inlet itself is not known to be a particularly productive fishing area.

The status of the Tanner crab stocks in the area is thought to be stable although the population in upper Lynn Canal is known to be heavily infected with the bitter crab disease. Since 1976, fewer than five permits have reported harvests in subdistrict 115-34 and catches have averaged about 24,000 lbs (Table 1). Catches and effort have declined in recent years. A major factor in this decline is the growing reluctance of processors to purchase Tanner crab caught in this area.

Catches of brown king crab in subdistrict 115-34 have averaged around 4,000 lbs annually. Catches from these areas represent less than 1.0% of the total Southeast harvest of brown king crab (Table 2). There has not been a commercial red king crab fishery in Southeast Alaska since 1984. When the commercial fishery was opened, catches were very small and effort was sporadic (Table 3).

The only personal use harvest information available for the Taiya Inlet area comes from a 1987 survey conducted by the Division of Subsistence. In 1987, approximately 5,400 lbs of king crab (all species) and

600 lbs of Tanner crab were reported for the community of Skagway. King and Tanner crab caught by commercial fishermen and retained for personal use may have been included in these estimates.

MANAGEMENT ISSUES

Because commercial catches of king and Tanner crab in the area proposed for closure are small, no major changes to current management strategies or guideline harvest levels would be necessary.

ENFORCEMENT ISSUES

No significant enforcement concerns are anticipated if this proposal is adopted.

FISCAL NOTE

Adoption of this proposal by the Board should not result in any significant increases in expenditures by the department.

CONCLUSIONS AND RECOMMENDATIONS

* This proposal is allocative. The Division of Commercial Fisheries will assume a neutral position regarding this proposal.

REGULATORY LANGUAGE

Should this proposal be adopted by the Board of Fisheries, the following regulatory language is suggested:

5 AAC 34.150. AREA A CLOSED WATERS. In Area A, the following waters are closed to the harvest of king crab:

(b) that portion of Section 15-A in Taiya Inlet north of the latitude of Taiya Point.

5 AAC 35.151. AREA A CLOSED WATERS. In Area A, the following waters are closed to the taking of Tanner crab:

(2) that portion of Section 15-A in Taiya Inlet north of the latitude of Taiya Point.

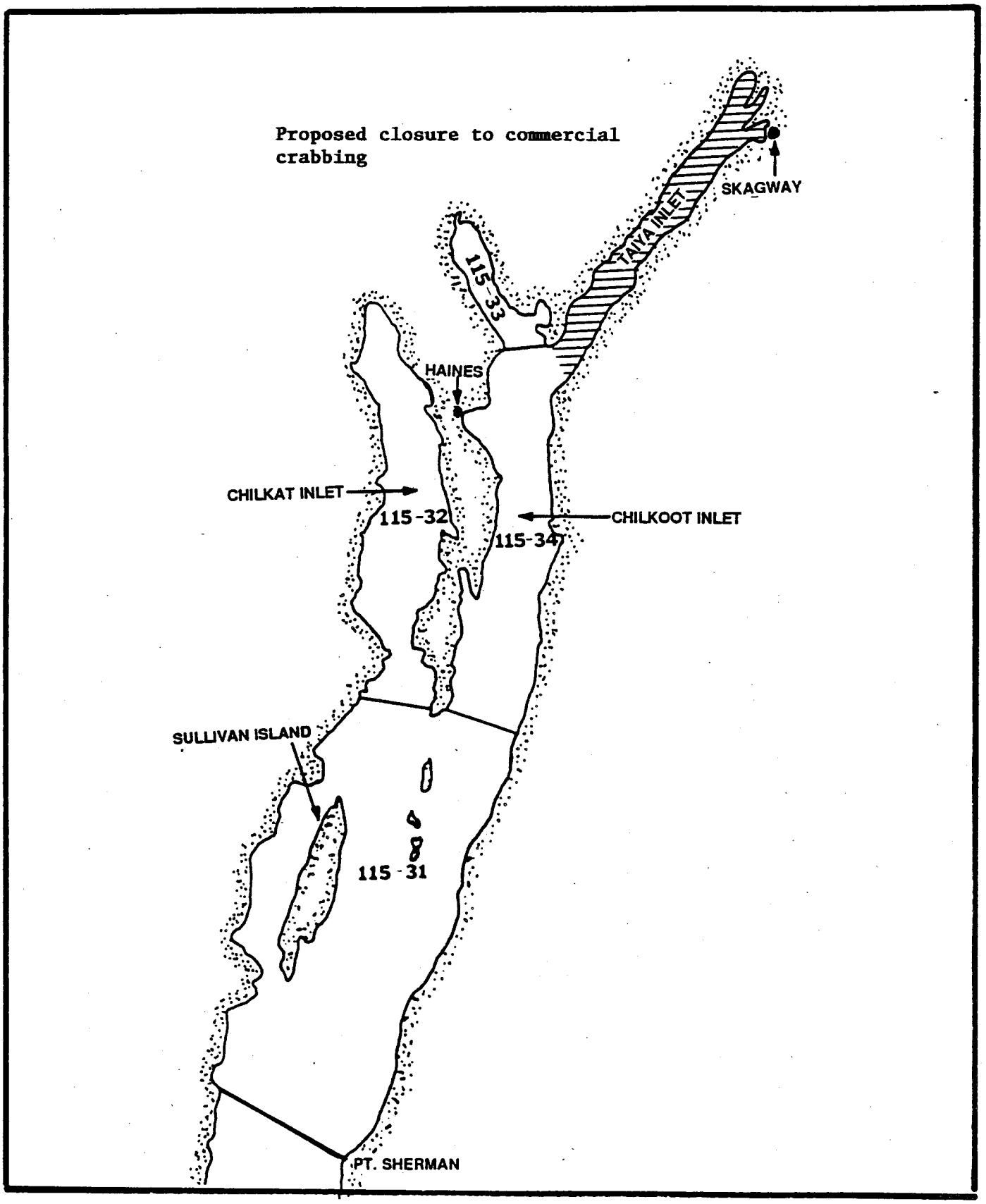


Figure 1. Proposal 281. Propsed closed area for commercial crabbing.

Table 1. Historical commercial Tanner crab harvest from subdistrict 115-34 including Taiya Inlet, and percent contribution to total Southeast harvest.

Season	Permits	Pounds	% of Southeast Harvest
1976/77	*	*	*
1977/78	*	*	*
1978/79	3	20,657	1.2
1979/80	*	*	*
1980/81	*	*	*
1981/82	*	*	*
1982/83	4	66,609	4.1
1983/84	5	44,436	3.9
1984/85	4	36,254	3.6
1985/86	4	45,439	4.0
1986/87	3	24,596	1.8
1987/88	4	17,715	1.1
1988/89	*	*	*
1989/90	*	*	*
Averages:		24,416	

Table 2. Historical commercial brown king crab harvest from subdistrict 115-34 including Taiya Inlet, and percent contribution to total Southeast harvest.

Season	Permits	Pounds	% of Southeast Harvest
1980/81	*	*	*
1981/82	*	*	*
1982/83	4	3,637	0.5
1983/84	6	7,758	0.8
1984/85	7	3,254	0.4
1985/86	4	4,569	0.7
1986/87	3	1,267	0.1
1987/88	5	16,133	1.7
1988/89	*	*	*
1989/90	*	*	*
1990/91	*	*	*
Averages:		4,391	

Table 3. Historical commercial red and blue king crab harvest from subdistrict 115-34 including Taiya Inlet, and percent contribution to total Southeast harvest.

Season	Permits	Pounds	% of Southeast Harvest
1977/78	*	*	*
1978/79	*	*	*
1979/80	*	*	*
1980/81	*	*	*
1981/82	*	*	*
1982/83	3	4,239	1.3
1983/84	*	*	*
1984/85	3	334	17.7
1985/86	*	*	*
1986/87	*	*	*
1987/88	*	*	*
Averages:		1,931	

[1] The last commercial red king crab fishery occurred from October 10 through October 17, 1984.

BOARD OF FISHERIES ACTION
PROPOSAL 281

Action: FAILED 7 to 0

One advisory committee had supported this proposal and there were some written comments in opposition of the proposal. The board felt that the burden of proof lies with the person submitting the proposal. The proposal lacked substance.

REGULATORY PROPOSAL 283

5 AAC 34.125. LAWFUL GEAR FOR AREA A.

5 AAC 34.185. LAWFUL GEAR FOR AREA D.

5 AAC 35.125. LAWFUL GEAR FOR AREA A.

5 AAC 35.180. LAWFUL GEAR FOR AREA D.

Require a sworn affidavit from the skipper,m supported by at least one crewman, prior to issuance of replacement sticker for king and Tanner crab pots in Southeast Alaska and Yakutat as follows:

5 AAC 34.125. LAWFUL GEAR FOR AREA A.

(X) A sworn affidavit from the skipper, supported by at least one crewman, is required prior to issuance of replacement sticks.

5 AAC 34.185. LAWFUL GEAR FOR AREA D.

(x) A sworn affidavit from the skipper, supported by at least one crewman, is required prior to issuance of replacement stickers.

5 AAC 35.125. LAWFUL GEAR FOR AREA A.

(X) A sworn affidavit from the skipper, supported by at least one crewman, is required prior to issuance of replacement stickers.

5 AAC 35.180. LAWFUL GEAR FOR AREA D.

(x) A sworn affidavit from the skipper, supported by at least one crewman, is required prior to issuance of replacement stickers.

PROBLEM: Regulations mandate pot identification stickers for Southeast Alaska (Area A) Tanner and king crab fisheries and in a portion of the Yakutat (Area D) Tanner and king crab pot fisheries. Pot limits for both king and Tanner fisheries are 100 per vessel; ring net limits for Tanner crab are 20 per vessel. Distribution of stickers is done during registrations of permits and gear at area offices. Pot stickers are

packaged in lots of 100/packet and are serially numbered on colored decals specific to a season; Southeast Tanner ring net stickers are packaged in lots of 20/packet.

Currently an informal buoy bag sticker replacement request form that asks for the buoy bag sticker numbers that have been lost or destroyed is used. The permit holder dates and signs the form. A department representative issues replacement stickers and also dates and signs the document. A database is maintained of all issued buoy stickers which allows Fish and Game to estimate fishing effort and Fish and Wildlife Protection to check compliance with pot and ring net limits.

Buoy stickers often need replacement in fisheries where there are extreme currents and temperatures and buoys may be deeply submerged. Buoys and their stickers have also been reported lost through theft or other causes. Part of the problem of sticker loss may be attributable to inconsistent quality in the adhesive used in the manufacturing process.

WHAT WILL HAPPEN IF NOTHING IS DONE? Fishermen are not required to identify the number of buoy stickers lost during any registration year. Only those fishermen who wish to replace their lost gear, or do not want to risk a citation, or for some other reasons ask for replacement buoy stickers. Without a formal affidavit, the legal basis for an enforceable pot or ring net limit is uncertain. The current regulation permits abuse.

WHO IS LIKELY TO BENEFIT? Fishermen who are attempting to comply with the intent of the regulations relating to pot limits.

WHO IS LIKELY TO SUFFER? Those fishermen who do not maintain sufficient records to verify the serial number of stickers lost. As fishing intensity increases, time necessary to return to town to request replacement buoy stickers results in lost fishing time.

OTHER SOLUTIONS CONSIDERED? Issuance of registration forms, buoy stickers and replacement stickers by Fish and Wildlife Protection Offices. The Division of Fish and Wildlife Protection maintains permanent and seasonal posts in more communities than the department, registrations and buoy stickers are enforcement oriented regulatory requirements, and fewer department employees are Peace Officers. Transfer of these responsibilities between departments will require considerable discussion before implementation.

Permanent plastic tags that must be attached to both the pot and the buoy train have been discussed. They could be either sequentially numbered or with a single number issued to each fisherman (ADF&G No.) in the amount corresponding with the pot limit, with the same number on the pot and the buoy train. This

option would be more costly to implement, at least on the short term, and might entail additional keeping on the part of the fisherman.

PROPOSED BY: Alaska Department of Fish and Game (HQ-92-F-252)

1992/93 BOARD OF FISHERIES BRIEFING DOCUMENT

Title: Procedures for replacement of lost buoy stickers for king and Tanner crab gear.

Proposal No. 283

Page 199

Proposed by: Alaska Department of Fish and Game

Commercial Fisheries Division Author: R.D. Mecum, Regional Management Biologist

SYNOPSIS

This proposal requests that the Board modify the existing regulations for replacement of lost buoy stickers for king and Tanner crab gear in Southeast Alaska and Yakutat. If adopted, this proposal would require the vessel operator and at least one crew member, in person, to submit a sworn affidavit, describing how the tags were lost and the numbers of the lost tags. This proposal was submitted to make the Southeast Alaska and Yakutat regulations consistent with regulations adopted by the Board of Fisheries for Statistical Areas T (Bristol Bay) and Q (Bering Sea).

BACKGROUND

Current shellfish regulations require pot identification stickers for the Statistical Area A (Southeast Alaska) king and Tanner crab pot and ringnet fisheries and for a portion of the Statistical Area D (Yakutat) king and Tanner crab pot fisheries. In Southeast Alaska, pot limits for both king and Tanner crab fisheries are 100 per vessel; ring net limits for Tanner crab are 20 per vessel. In Yakutat Bay, the pot limits are 100 per vessel. No ring nets are allowed in Statistical Area D.

Buoy stickers are constructed of a tough plastic with a "high-tack", adhesive backing. However, fishing activities often result in the loss of a pot or loss of a sticker. In such instances, fishermen may request replacement stickers in writing as required by regulation. Although there is a regulatory requirement to list specific lost stickers, there have been some false claims of lost stickers submitted in order obtain and use more than the legal limit of gear. The current regulation requires only the vessel operator to sign the written request. This has been insufficient to discourage false claims of tag loss.

This proposal requests at least one more signature on the request form to substantiate the reported loss. The department will need to formalize its present administrative procedures for replacement of lost stickers.

MANAGEMENT ISSUES

The primary management intent is to provide for replacement of lost stickers so no one exceeds the gear limit. Requiring more than one signature on an affidavit does not insure compliance, but serves more as a deterrent to overt abuses.

ENFORCEMENT ISSUES

Enforcement of the legal limit of gear would be facilitated by regulations requiring better accounting of buoy sticker replacements or use of more durable stickers. The department does not anticipate that adoption of this proposal will result in the need for significant increases in expenditures by the department of Public Safety.

FISCAL NOTE

The department does not foresee any significant costs associated with the adoption of this proposal. Staff will need to follow slightly more rigorous administrative proccdure, such as insuring that the proper signatures are affixed to affidavits.

CONCLUSIONS AND RECOMMENDATIONS

* Adoption of this proposal would 1) facilitate enforcement of the king and Tanner gear limits while providing for distribution of legitimate replacements for lost stickers, and 2) result in consistency of sticker replacement regulations.

REGULATORY LANGUAGE

If this proposal is adopted, the following regulatory language is suggested:

5 AAC 34.125. LAWFUL GEAR FOR AREA A.

(g) In Area A, in locations where a king crab pot limit is in effect, each king crab pot must have an identification tag issued by the department, and

(1) the tag must be placed on the main buoy, or on the trailer buoy if more than one buoy is attached to the pot;

(2) the tags will be issued before each fishing season and will be uniquely numbered for each registration year;

(3) the tags will be issued at the time of registration for the vessel only; each applicant shall apply at offices of the department designated to issue the tags;

(4) replacement of tags lost during the season is permitted if the vessel operator and at least one crew member, in person submit a sworn statement or affidavit describing how the tags were lost and listing the numbers of the lost tags;

(5) annual renewal of the tags must be accomplished by obtaining new tags before each fishing season.

5 AAC 34.185. LAWFUL GEAR FOR AREA D. (a) The provisions for Area A in 5AAC 34.125 (a), (b), (d), [and] (e), and (g)(1) - (5) apply to area D.

5 AAC 35.125. LAWFUL GEAR FOR AREA A.

(e)(4) replacement of tags lost during the season is permitted if the vessel operator and at least one crew member, in person, submit[s] a sworn statement or affidavit describing how the tags were lost and listing the numbers of the lost tags;

BOARD OF FISHERIES ACTION
PROPOSAL 283

Action: ADOPTED 7 to 0

Other than to note that this would bring Southeast and Yakutat into compliance with the rest of the state, the board spent little time discussing this proposal. There was no opposition from advisory committees. The new regulation provides for replacement of lost buoy stickers after a signed statement is provided by the skipper and at least one crewman.

ADOPTED REGULATORY LANGUAGE
PROPOSAL 283

5 AAC 35.125(e)(4) is amended to read:

PROPOSAL 283A

(4) replacement of tags lost during the season is permitted if the vessel operator and at least one crew member, in person submit[S] a sworn statement or affidavit describing how the tags were lost and listing the numbers of the lost tags; (In effect before 1982; am 4/14/82, Register 82; am 6/30/83, Register 86; am 6/30/84, Register 90; am 7/14/85, Register 95; am 7/12/86, Register 99; am 12/14/86, Register 100; am 7/23/88, Register 107; am 9/19/90, Register 115; am __/__/93, Register).

Authority: AS 16.05.251

PROPOSAL 283A

(g) In Area A, in locations where a king crab pot limit is in effect, each king crab pot must have an identification tag issued by the department, and

(1) the tag must be placed on the main buoy, or on the trailer buoy if more than one buoy is attached to the pot;

(2) the tags will be issued before each fishing season and will be uniquely numbered for each registration year;

(3) the tags will be issued at the time of registration for the vessel only; each applicant shall apply at offices of the department designated to issue the tags;

(4) replacement of tags lost during the season is permitted if the vessel operator and one crew member submit, in person, a sworn statement or affidavit describing how the tags were lost and listing the numbers of the lost tags;

(5) annual renewal of the tags must be accomplished by obtaining new tags before each fishing season. (In effect before 1982; am 4/14/82, Register 82; am 7/25/82, Register 83; am 6/30/83, Register 86; am 6/30/84, Register 90; am 7/14/85, Register 95; am 7/12/86, Register 99; am 12/14/86, Register 100; am 7/23/88, Register 107; am 9/19/90, Register 115; am __/__/93, Register).

Authority: AS 16.05.251

REGULATORY PROPOSAL 284

5 AAC 34.100. DESCRIPTION OF STATISTICAL AREA A.

5 AAC 34.160. DESCRIPTION OF STATISTICAL AREA D.

5 AAC 35.100. DESCRIPTION OF STATISTICAL AREA A.

5 AAC 35.160. DESCRIPTION OF STATISTICAL AREA D.

Change the description of the Cape Fairweather boundary separating the king and Tanner crab Statistical Areas A (Southeast Alaska), and D (Yakutat) to correspond to a Loran-C line as follows:

5 AAC 34.100. DESCRIPTION OF STATISTICAL AREA A.

(x) the boundary at Cape Fairweather is that described by the Loran-C 7960-Y-29590 line.

5 AAC 34.160. DESCRIPTION OF STATISTICAL AREA D.

(x) the boundary at Cape Fairweather is that described by the Loran-C 7960-Y-29590 line.

5 AAC 35.100. DESCRIPTION OF STATISTICAL AREA A.

(x) the boundary at Cape Fairweather is that described by the Loran-C 7960-Y-29590 line.

5 AAC 35.160. DESCRIPTION OF STATISTICAL AREA D.

(x) the boundary at Cape Fairweather is that described by the Loran-C 7960-Y-29590 line.

PROBLEM: The registration area boundary at Cape Fairweather, separating the Southeast Alaska and Yakutat areas, is difficult to determine because there is not clearly definable point at the Cape, which is a broad expanse of relatively flat terrain that presents a poor radar image. Further, it is difficult to access the Cape by either aircraft or boat to erect and maintain regulatory markers. The fisheries on either side of the boundary open at different times. In some cases, notably that for Dungeness crab but also for Tanner crab, the grounds surrounding the Cape can be very productive. In very competitive fisheries there are incentives for pushing the line. The present boundary cannot be easily enforced and even if markers could be installed, maintaining them would be very difficult. The department will submit appropriate

proposals to change the description of the Cape Fairweather boundary for all fisheries as the board addresses these fisheries at future meetings.

WHAT WILL HAPPEN IF NOTHING IS DONE? If this problem is not solved, it is likely that the practice of fishing over the line will continue and those fishing in the registration area that opens earlier will fish on stocks over the line in the closed area. Enforcement of the line will continue to be very difficult.

WHO IS LIKELY TO BENEFIT? Fishermen should benefit by the clearer definition of the boundary line at the Cape. Enforcement of the line will be easier. The proposed Loran line will not coincide exactly with the true southwest bearing now used as the boundary. However, the discrepancies are minor and will not significantly affect the catch reporting or management of the salmon troll fishery, the only other major fishery using the same statistical are charts for this area.

WHO IS LIKELY TO SUFFER? The only people who may suffer from this change would be those who would otherwise push or cross the line to benefit from fishing in a closed area.

OTHER SOLUTIONS CONSIDERED? Emplacement and maintenance of regulatory markers to define the point from which southwest bearings could be taken was considered. A marker may be necessary to define the boundary as well as possible against the rare occurrence of a shutdown or perturbation of the Loran-C system. Shutdowns of the Loran-C system are so infrequent and generally of such short duration that the probability of a gear-setting problem due to a failure of the system are very low.

PROPOSED BY: Alaska Department of Fish and Game (HQ-02-F-282)

1992/93 BOARD OF FISHERIES BRIEFING DOCUMENT

Title:	Change the description of the boundary between Statistical Area A and Statistical Area D at Cape Fairweather to a Loran-C line.
Proposal No.	284
Page	201
Proposed by:	Alaska Department of Fish and Game
Commercial Fisheries Division Author:	Kenneth K. Imamura, Asst. Shellfish Biologist

SYNOPSIS

The description of the boundary between Statistical Area A and D specifies a line projected southwest (true) from the westernmost tip of Cape Fairweather. For many years, this was a satisfactory line because there were no intensely competitive fisheries in the general area. This is no longer the case, particularly for the Dungeness crab fisheries on both sides of the line. This proposal requests changing the definition of the line to the Loran-C, 7960-Y-29590 line to more clearly distinguish one area from the other to facilitate management of the fisheries and enforcement of the regulations.

BACKGROUND

During the past few seasons, the Dungeness crab fishery in District 16 on the outside coast of Statistical Area A (Southeast Alaska) between Cape Spencer and Cape Fairweather has been entered by a growing number of vessels. Much of this effort consists of mid-40 to 50 foot vessels displaced from their traditional fishing grounds in more protected, inland bays and waterways by the recent growth in the Southeast Alaska Dungeness crab fishery. The grounds in District 16 are the only productive areas for Dungeness crab on the outer coast of Southeast Alaska. The productive fishing areas in District 16 are further limited to the area around and immediately east of the Statistical Area boundary at Cape Fairweather. Once-productive bays and inlets between Icy Point and Cape Spencer have been colonized by sea otter and no longer support commercially viable populations of Dungeness crab. This situation has resulted in an incentive by vessels fishing in this area to crowd, and occasionally cross, the boundary line.

Although part of the problem may be vessels registered in Southeast Alaska fishing over the line, the bigger problem is that the fishery in Statistical Area D (Yakutat) starts a month earlier (May 15) than the fishery in Southeast Alaska (June 15), is fished by larger vessels, and has a 600 pot limit (double that allowed in Statistical Area A). Particularly in those seasons when large numbers of vessels enter the Yakutat fishery or during which the westward grounds around Icy Bay are weaker than those off the Yakutat Forelands, vessels registered for Statistical Area D have pushed, or crossed, the boundary to fish in Southeast Alaska waters that do not open for a month after the start of the Statistical Area D fishery. From this standpoint, the issue is also one of equal access. For example, if the seasons opened at the same time there would be much less incentive for fishermen to cross the line.

Crossing the boundary is a legal issue because both Statistical Area A and D are superexclusive registration areas and a vessel registered in either cannot legally participate in Dungeness fisheries in any other Alaskan Dungeness fishery for that calendar year.

Cape Fairweather is a wide, flat area with a poor radar signature. There are no permanent features nor regulatory markers at the cape on which to take bearings, even if that were possible from the fishing grounds extending miles offshore. It is difficult under the best circumstances to ascertain a vessel's location relative to a true compass bearing from an indefinite point on the cape.

MANAGEMENT ISSUES

The management issue is limited to misreporting of catch taken out of area. The crabs on either side of the line probably belong to the same stock so the side they are taken on is a minor biological consideration.

This proposed change in the regulations should be carried over into all pertinent regulations for finfish and shellfish. As a result the department is submitting this proposal to change the king and Tanner crab regulations for Southeast and Yakutat. The department will submit similar proposals to modify regulations for other fisheries when they are addressed by the Board.

ENFORCEMENT ISSUES

Enforcement of the Loran-C line should be easier than the current boundary description. Fish and Wildlife Protection may have additional comments regarding enforcement concerns.

FISCAL NOTE

The department does not foresee any significant costs associated with adoption of this proposal.

CONCLUSIONS AND RECOMMENDATIONS

* Changing the definition of the boundary line between Statistical Area A and D to Loran-C line 7960-Y-29590 would facilitate compliance with regulations and enforcement of the boundary at Cape Fairweather.

REGULATORY LANGUAGE

Should this proposal be adopted, the following wording is suggested:

5 AAC 34.100 and 35.100. DESCRIPTION OF STATISTICAL AREA A. Statistical Area A (Southeastern Alaska) has as its southern boundary the International Boundary at Dixon Entrance, and its northern boundary [a line projected southwest from the westernmost tip of Cape Fairweather] the Loran-C 7960-Y-29590 line intersecting the western tip of Cape Fairweather (58°47'58" N. lat., 137°56'30" W. long.).

5 AAC 34.160 and 35.160. DESCRIPTION OF STATISTICAL AREA D. Statistical Area D has as its western boundary the longitude of Cape Suckling (143°53' W. long.), and its southern boundary [a line projected southwest from the westernmost tip of Cape Fairweather] the Loran-C 7960-Y-29590 line intersecting the western tip of Cape Fairweather (58°47'58" N. lat., 137°56'30" W. long.).

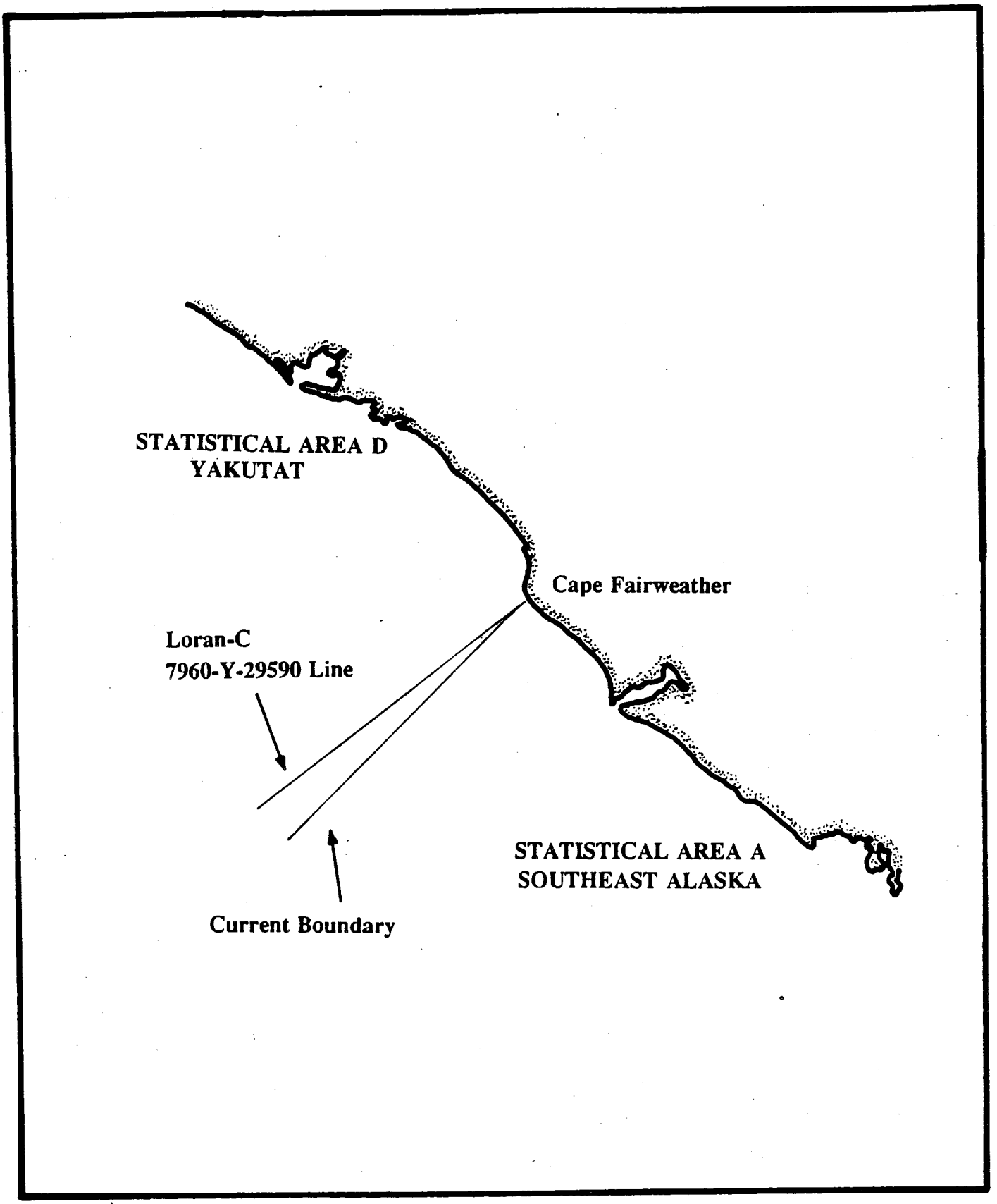


Figure 1. Proposal 284. Cape Fairweather boundary change.

BOARD OF FISHERIES ACTION
PROPOSAL 284

Action: ADOPTED 7 to 0

The board viewed this proposal as a way of providing a more orderly fishery. By changing the boundary of Statistical Area A and D to a Loran-C line and latitude and longitude at Cape Fairweather, more accurate catch reporting and better line enforcement is made possible.

ADOPTED REGULATORY LANGUAGE
PROPOSAL 284

5 AAC 35.160 is amended to read:

PROPOSAL 284A

35.160. DESCRIPTION OF STATISTICAL AREA D.

Statistical Area D has as its western boundary the longitude of Cape Suckling (143°53' W. long.), and its southern boundary the Loran-C 7960-Y-29590 line intersecting the westernmost tip of Cape Fairweather (58°47'58" N. lat., 137°56'30" W. long.) [A LINE PROJECTED SOUTHWEST FROM THE WESTERNMOST TIP OF CAPE FAIRWEATHER]. (Eff. 12/14/86, Register 100; am 7/30/89, Register 111; am __/__/93, Register).

Authority: AS 16.05.251

REGULATORY PROPOSAL 285

ARTICLE X. STATISTICAL AREA D (YAKUTAT) 5 AAC 34.XXX. ARTICLE X. STATISTICAL AREA D (YAKUTAT) - 5 AAC 35.XXX.

Authorize the department to restructure the commercial king and Tanner crab regulations to create separate articles for Yakutat (Statistical Area D) as follows:

ARTICLE X. STATISTICAL AREA D (YAKUTAT)

5 AAC 34.XXX. The department is authorized to restructure the commercial Tanner crab regulations to create a separate article for Yakutat.

PROBLEM: Yakutat and Southeastern were once combined in the same registration area and the regulations for both areas were included under the same articles for both king and Tanner crab. When Yakutat was established as a registration area separate and distinct from Southeastern, the regulations were not rewritten to reflect its status as a new registration area. The present combination of both areas under one article is confusing and inconsistent with the organization of regulations for other registration areas. This request is largely an administrative housekeeping proposal for consistent organization of regulations pertaining to separate registration areas and to minimize the confusion related to having two registration areas under a single article.

WHAT WILL HAPPEN IF NOTHING IS DONE? The regulations will continue to be inconsistent, as will general confusion by the public as to how the regulations are perceived.

WHO IS LIKELY TO BENEFIT? The general public and other user groups.

WHO IS LIKELY TO SUFFER? No one, as the intend of the proposal is to change how the regulations are arranged and not to alter the individual regulations.

OTHER SOLUTIONS CONSIDERED? Status quo.

PROPOSED BY: Alaska Department of Fish and Game (HQ-92-F-254)

1992/93 BOARD OF FISHERIES BRIEFING DOCUMENT

Title:	Create Separate Article for Yakutat King and Tanner Crab Regulations
Proposal No.	285
Page	202
Proposed by:	Alaska Department of Fish and Game
Commercial Fisheries Division Author:	Kenneth K. Imamura

SYNOPSIS

This proposal was submitted to separate Southeast Alaska and Yakutat king and Tanner crab regulations into two articles so they would be consistent in structure with all other registration areas of the State. However, after consulting the Department of Law, ADF&G has determined that a separate article can be established administratively; no changes to existing regulations will be required.

BACKGROUND

Prior to 1987, Statistical Area D (Cape Fairweather to Cape Yakataga) was an informally defined subarea of Statistical Area A. Increasing participation, expanding management complexity, and the unique nature of many of Yakutat area fisheries compelled the department to request designation of Yakutat as a separate registration area. Operationally, this meant that vessels had to register separately for Areas A and D and the registration status for various fisheries could be distinct. Catch could be attributed more clearly to a registration area and reporting requirements for deliveries outside the area could be more stringently enforced. Administratively, it meant that seasons, quotas, gear limits, and other conditions for use in the two registration areas were more clearly defined.

Their current combined structure has its basis in 1987, when the Board of Fisheries designated Yakutat a separate registration area from Southeast Alaska. This required major regulatory revisions and it was felt at that time that changes to the Articles were beyond those mandated by the Board. Therefore, both Statistical Area A and D were still combined within Article 5. These two registration areas are the only ones that are combined under a single article and is the last vestige of their past association. This results in inconsistency in the structure of the regulations and has caused some confusion in the past.

MANAGEMENT ISSUES

Clear definition and consistency in the regulations would minimize confusion. Establishment of a separate article would complete the process of dividing Statistical Area D from Statistical Area A.

ENFORCEMENT ISSUES

The department does not anticipate that adoption of this proposal will result in increased need for enforcement activities or expenditures.

FISCAL NOTE

The department does not foresee any significant costs associated with adoption of this proposal.

CONCLUSIONS AND RECOMMENDATIONS

* Since the initial submission of this proposal, the Department of Law has advised ADF&G that the requested changes appear to be essentially administrative changes to the structure, rather than wording, of the regulations. As such, the necessary changes can be made without Board action.

REGULATORY LANGUAGE

None suggested.

BOARD OF FISHERIES
PROPOSAL 285

Action: NO ACTION

The Department of Law met with staff just prior to the meeting and informed us that this proposal could be handled administratively.

REGULATORY PROPOSAL 351

5 AAC XXX.XXX.

By permit from the Commissioner, first hardshell stage king may be taken by king crab mariculture operators to raise to maturity. Permit stipulates_____% be released to enhance the wild stock____% be retained by operator.

PROBLEM: Nothing is being done to develop and enhance the king crab resources in S.E. Alaska.

WHAT WILL HAPPEN IF NOTHING IS DONE? Predation primarily and other environmental causes will keep king crab stocks at critically low levels, seldom strong enough to support commercial fishing.

WHO IS LIKE TO BENEFIT: State of Alaska if this method of enhancement undertaken under strait management guidelines, significantly higher level of survival will occur and cause the stocks to rebound.

WHO IS LIKE TO SUFFER: No one.

OTHER SOLUTIONS CONSIDERED? King crab hatcheries. Needs more development and research. Should be a FRED project but will likely not be funded.

PROPOSED BY: Sigurd Mathison (HQ-92-F-168)

Title:	Allow mariculture operators to harvest juvenile king crab for enhancement and development programs.
Proposal No.	351
Page	246
Proposed by:	Sigurd Mathison
Commercial Fisheries Division Author:	James O. Cochran, Mariculture Coordinator, FRED Division